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ABSTRACT

This document describes the need for the implementation of the concept of accountability, reviews the literature on accountability, and outlines a plan for establishing accountability in the public schools of North Carolina. According to the report, the North Carolina program emphasizes accountability for accreditation and uses an accountability approach to make both State and regional accreditation a meaningful accomplishment. The report outlines the North Carolina plan for accountability, describes implementation of the accountability model, and details steps to be taken toward accountability by both school systems and the State agency. Appendixes contain reviews of literature on accountability. (JF)

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Table of Contents

Rational and Guidelines

- Introduction..... 1
- The Need for Accountability..... 1
- Reasons for Intensified Interest in Accountability..... 2
- Definitions of Accountatility..... 3
- The State's Responsibility for Accountability..... 4
- Accountability and Change..... 5
- Guidelines for Development of a Model for Accountability..... 5

A Program of Accountability for the Accreditation of Local School Systems in North Carolina

- Policy Guidelines for an Accountability Model for Accreditation..... 7
- Accountability Objective for North Carolina..... 8
- Strategies for Meeting Objective..... 9
- Outline of Plan for Accountability.....10
- Organizing for Planning.....11
- Processes for Completing a Plan for Accountability.....12
- The Two Phases for Implementing the Accountability Model.....16
  - .. Process for Reviewing Plan.....16
  - .. Process for Determining Congruence Between the Plan and its Implementation.....17
- Suggested Criteria for Evaluation Plans Submitted by School Systems.....18
- Summary.....19

Appendices

A. Statements on Accountability

B. Specific Projects in Accountability now Underway in North Carolina

C. A review of Literature on Accountability

- Open Letter
- ERIC Documents
- Books and Pamphlets
- Journal Articles (Summaries)
- Two Articles on Accountability from Phi Delta Kappan
  - .. "An Approach to Developing Accountability Measures for the Public Schools" by Stephen M. Barro
  - .. "Toward Objective Criteria of Professional Accountability in the Schools of New York City" by Henry S. Dyer

RATIONALE AND GUIDELINES

Introduction

> "Accountability in education is, among other things, an attempt to build responsibility into the system so that it cannot be avoided."
> ---Leon Lessinger

It was inevitable that educators would have to move to such a policy in response to the increasingly frustrating problems in education and in response to the public's demands for improvement. The content of this policy of responsibility through accountability and the means for its implementation are not so obvious, however. The purpose of this document is to describe the need for the implementation of the concept of accountability, review the literature in this area, and outline the plan for establishing accountability in the public schools of North Carolina.

The Need for Accountability

The largest portion of state and local expenditures -- that allocated to education -- has grown from $6.5 billion in 1947 to approximately $68 billion in 1969. This is more than a 1,000 percent increase in expenditures for education in a time when the Gross National Product went from $234.3 billion to $931.4 billion, an increase of 400 percent. In terms of resources allocated, the American school system is the most expensive in the world. Despite this enormous expenditure, an estimated 15,000,000 students in the United States remain functionally illiterate; there is a 70 percent dropout rate in poverty-stricken urban areas; and one-third of all high school graduates taking the fifth-grade-level Armed Forces Qualifying Examination fail to pass it.

Thus, it is hardly surprising that a Gallup Poll in the fall of 1970 indicated that 80 percent of the population wants some form of accountability for the 20 cents of every tax dollar now being spent on education. A similar

poll in 1971 indicated that the public, in overwhelming numbers, desires some proof that their schools are good. This intensified interest is evident among many divergent groups and individuals -- scholars, politicians, businessmen, local and state school officials, federal agencies, labor organizations, parents, and the ordinary tax payers who, more than ever, want to know if their dollars are being spent wisely. The persistent and common question among all these individuals and groups is this: "How can we be assured that our input of resources is efficiently used to induce worthwhile learning in our students?"

Reasons for Intensified Interest in Accountability

The call for accountability has evolved for the following reasons, among others, and is now being heard in loud and increasingly persistent tones:

- The accelerating costs of education, demanding a significant proportion of local and state tax revenues, have caused legislators and citizens to become more and more concerned about the benefits resulting from these expenditures. This concern for cost-effectiveness, this pressure for economy and efficiency, this business of relating dollar input to learning output, has permeated all aspects of society and gives promise of forming the basis for widespread improvements in many segments of our culture.

- Ineffective evaluation of educational projects funded by the Federal Government, as well as inconclusive evidence that large federal funds are making any significant difference in the quality of education, have encouraged enthusiasm for accountability at the national level. Simultaneous awareness of economy and productivity has become the unifying slogan among leaders in the national scene.

- Though school critics at times have been contradictory, unrealistic, and unfair, the schools themselves, with increasing honesty, have realized and admitted their vulnerability, their failure to achieve objectives, and their desire to find better ways of guaranteeing education for all students.

- Complaints, more often from the inner city areas and from disadvantaged groups elsewhere, have focused attention on the school's current inability to educate students effectively. Activists among minority groups have helped to intensify the widespread interest in accountability.

- The rising educational level of our population is reflected in a growing concern among many citizens for educational programs that measure up to the needs and demands of modern youth. This pressure for improved educational programs, generally regarded as a healthy manifestation of genuine concern, is now a common characteristic among citizens throughout the nation.

- The growing insistence among students that educational programs should be more relevant to personal needs has also contributed to the widespread interest in accountability.

- The nationwide demand for public participation in decision-making processes in all areas, including education, is based to a degree on a widespread dissatisfaction with leadership. Moreover, a growing desire to influence decision-making processes is part of the recent emphasis throughout society on participatory democracy. As a result, increasing numbers are asking perceptive questions about education and insisting on helping to find the answers.

Definitions of Accountability

Since the term "accountability," especially for educators, has come to have specific implications that do not appear in the dictionaries, it is important to review several definitions:

> "...Accountability is a procedure whereby resources and efforts are related to results in ways that are useful for policy-making, resource allocation, or compensation." ---Myron Lieberman
>
> "Accountability is, in essence, a statment of policy. It states that educators will accept responsibility for their performance - or lack of it. It implies that there is a contract between school personnel and the public and that contract involves more than showing up for work on time." ---Nolan Estes and Donal R. Waldrip
>
> "Accountability is the product of a process." At its most basic level, "...it means that an agent, public or private, entering into a contractual agreement to perform a service will be held answerable for performing according to agreed-upon terms, within an established time period, and with a stipulated use of resources and performance standards. This definition of accountability requires that the parties to the contract keep clear and complete records and that this information be available for outside review. It also suggests penalties and rewards; accountability without redress or incentive is mere rhetoric."
> ---Leon Lessinger
>
> "Accountability is not performance contracting. Accountability is not program budgeting (P.P.B.S.). Accountability is not cost effectiveness. It is not testing nor is it merit pay for teachers, or a means of relieving

teachers of their jobs. Accountability is the guarantee that all students without respect to race, income, or social class will acquire the minimum school skills necessary to take full advantage of the choices that accrue upon successful completion of public schooling." ---John W. Porter

"Accountability means to me a continuous willingness to evaluate education, to explain and interpret the results with all candor, to divulge the results to the publics or constituencies that need to know them, and to be personally and organizationally responsible for the weaknesses as well as the strengths revealed. ...what it means is that school boards and local and state educators will face the responsibility of taking the public into full partnership -- explaining the problems and limitations of testing and other means of evaluating education, welcoming assistance, and sharing the resulting information (after having done everything possible to assure that it will be properly interpreted and used)." ---Ewald B. Nyquist

Examination of these definitions reveals a number of components to accountability which are incorporated in North Carolina's specific model of accountability for accreditation. Each definition suggests directly or implies that accountability involves: 1) processes of planning for educational outcomes and 2) processes for assessing educational outcomes.

The State's Responsibility for Accountability

Though responsibilities for accountability, of necessity, must be widely dispersed, State education agencies, more and more, are being held accountable for accomplishing those objectives voluntarily agreed upon as well as those mandated by legislation. Through SEA leadership, it is anticipated that the State model of accountability for accreditation will be useful in promoting accountability at the local as well as the State level.

Acceptance of this responsibility at the State level will likely impose upon the SEA specific tasks, including such ones as these: modifying budget processes used by local school systems, goal-setting processes, performance measures, and information system.

Accountability and Change

Serious implementation of the accountability concept, in and of itself, suggests willingness to make desirable change. All steps in an accountability cycle, from the cooperative determination of objectives to the recycling of objectives, suggest that the overall goal of accountability is desirable change.

It follows, then, that cooperative and constant accountability might be equated with creative and continuing change -- change which clearly reflects the who and what of responsibility at all levels of the educational ladder. Accountability as a new and viable management process, has as its compelling purposethe continuing improvement of all aspects of education.

Guidelines for Developing a Model for Accountability

To be viable at the state level and at the local level, any plan or model of accountability must be understood and appreciated in terms of its need, its purposes, and its possibilities. Significant guidelines include the following:

- Appropriate relationships between the SEA and LEA's should be cooperatively determined and responsibilities of each should be clearly specified in the plan or model.
- Throughout an accountability model emphasis should be placed on the concept that educational output, at all times, must be related to all types of process and resource input.
- The model should make clear that valid accountability demands information from many sources, and that this information should be as objective as possible.
- The model should insist on the necessity for accountability's being a continuing process.
- The model should emphasize the fact that accountability, to be effective, must have the commitment of the SEA, the State Board of Education, local boards of education, local school personnel, including students, and laymen.

- Since accountability is such an integral part of the total educational program, educators themselves should have a major, though not an exclusive role, in formulating accountability programs. It is particularly important that teachers be given partial control in setting standards for which they will be responsible.

- Additional consideration should be given to parent responsibility. (The 1971 Gallup Poll indicated that 54 percent of the adults interviewed said that poor work in school was chiefly the result of parent apathy, ignorance, and the like.)

- Accountability must be perceived as relating to the total educational program, including such components as planning, evaluation, accreditation, programming, budgeting, and credentialing.

- Information related to accountability must be clearly and accurately presented to the public.

A PROGRAM OF ACCOUNTABILITY FOR THE ACCREDITATION OF LOCAL SCHOOL SYSTEMS IN NORTH CAROLINA

Proposals for making school systems accountable vary from moderate reform to revolution. The following model, designed as North Carolina's initial approach to statewide accountability, emphasizes primarily "accountability for accreditation." Though a comprehensive plan for accountability might include a number of factors, North Carolina's plan, in essence, focuses attention on accountability as a viable approach to making state and regional accreditation a genuinely meaningful accomplishment. As a matter of fact, every effort will be made to coordinate accreditation efforts in order that state and regional accreditation will be based on the awareness and accomplishment of similar objectives.

Policy Guidelines for an Accountability Model for Accreditation

- The State Education Agency is responsible for continuing leadership in emphasizing the undeniable importance of accountability as a basic component in the planning-management-accountability syndrome.
- As school systems move toward improved educational programs through emphasis on planning and management, intensified attention must be given to accountability as that process which indicates to what degree and how well school systems are accomplishing objectives which have been agreed upon.
- As skills in planning and management are developed for improving school systems, particular emphasis should also be placed on developing specific skills in the process of accountability as an integral ingredient in the total effort to achieve educational objectives.
- Since accountability is the responsibility of many individuals and groups, clarification of who is responsible for what is mandatory. Implementation of the concept, "management by objectives," definitely suggests that managers themselves are also accountable for what happens in the schools.
- The SEA, likewise, must accept its responsibility for effective programs of accountability and will be judged in terms of statewide improvement among students as well as improvement in learning opportunities and in the learning environment.

- Though professional educators are ultimately responsible for the success of a program of accountability, early involvement of non-educators in planning programs of accountability is essential for continuing public support.

- Implementation of an accountability program presupposes the cooperative development of specific objectives, interpreted in terms of performance criteria, in order that objectives may be effectively evaluated.

- Performance standards for students in a particular school system must be developed in relationship to the measured potential of students. In some instances, statewide assessment data and other types of information may be utilized.

- Local administrative units will voluntarily participate in programs of accountability for accreditation, after the State plan for accountability has been approved by the Executive Committee of the State Agency, refined through pilot programs, and approved by the State Superintendent.

- Local plans for accreditation through programs of accountability should be conceived in terms of local school systems, not individual schools, and should incorporate the minimum standards suggested in the State plan.

- In addition to this type of flexibility, local school systems will be encouraged to be as creative and imaginative as possible in determining the degree to which they have achieved accountability in all areas, especially those peculiar to a particular school system. Accreditation through accountability need not limit creative approaches to objective and subjective appraisals of the total educational program.

- Local school systems will be accredited and, in some instances, as Legislative action permits, receive other rewards on the basis of whether stated objectives in the plan for accountability have been achieved.

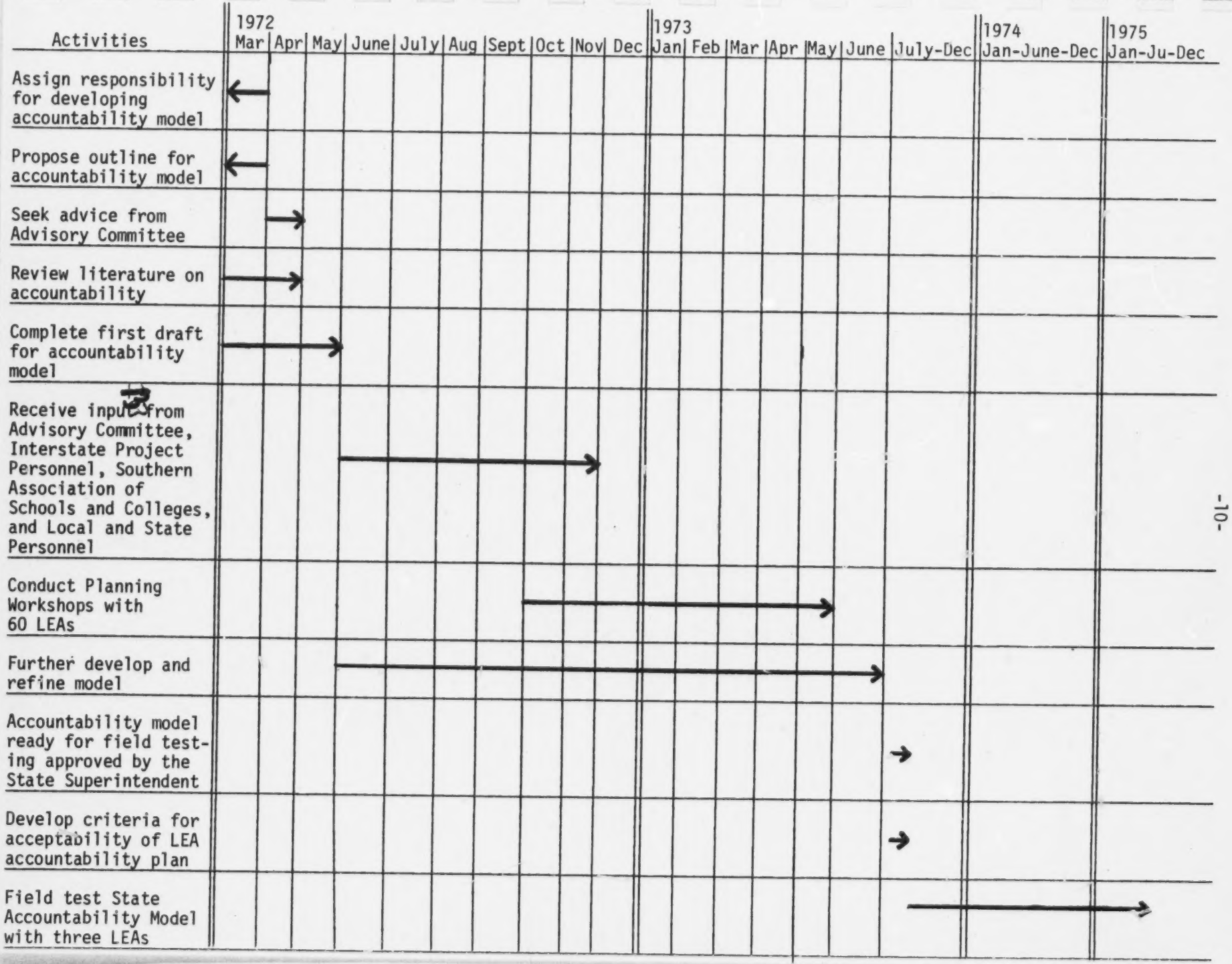
Accountability Objective for North Carolina

By July 1, 1975, a model for the State accountability program will be developed and field tested.

Strategies for Meeting Objective

- By March 1, 1972, a team of State Education Agency Personnel will be assigned the responsibility for developing an accountability model.
- By June 1, 1972, a review of literature on accountability and the first draft for the accountability model will be completed. (This will be presented at the Interstate Project meeting in Miami on May 22-23)
- By September 1, 1972, an advisory committee composed of students, parents, legislators, lay public, and educators will be selected to advise the team of workers assigned to develop the accountability model.
- By December 1, 1972, the accountability team will have received input from the advisory group, Interstate Project Personnel, Southern Association of Schools and Colleges, four local experimental programs in accountability presently in operation, local school unit personnel, and State agency personnel.
- By June 1, 1973, Division of Planning personnel will have conducted workshops with 60 LEA's for the purpose of improving planning and management capabilities. At this time, the importance of accountability, its proposed relationship to accreditation in North Carolina, and the SEA's progress in developing a model will be presented and discussed.
- By July 1, 1973, an accountability plan ready for field testing in local school districts will be approved by the State Board of Education and the State Superintendent of Public Instruction.
- By August 1, 1973, criteria for acceptability of LEA accountability plans will be developed and approved by the State Superintendent.
- By August 1, 1973, three selected LEA's will begin to develop plans for field testing the State Accountability model.
- By December 1, 1973, each of the three LEA's will have submitted an initial accountability plan.
- By May 1, 1974, the accountability plan of each of the three LEA's will receive final approval.
- By July 1, 1974, implementation of each of the approved plans will have begun.
- By June 30, 1975, field testing of the State accountability model will have been completed by each of the three LEA's.

OUTLINE OF PLAN FOR ACCOUNTABILITY



Organizing for Planning

The local school board, with the assistance of the school superintendent and his professional staff, along with representative citizens and students, will be responsible for developing a comprehensive accountability plan for their school system. Specific responsibilities for various individuals and groups are indicated below:

The local school board

- Establish policy and guidelines for developing plan
- Establish priorities for the school system
- Establish climate which will insure that planning will be an integral part of the school system's operational structure
- Encourage the involvement of non-educators in the planning process

The local superintendent

- Implement policies and responsibilities accepted or established by the school board
- Provide leadership as chairman of the planning team in developing a comprehensive plan for the entire school system
- Present plan to school board, other local groups, and the independent evaluation team for approval
- Establish priorities and policies which support rather than conflict with those established by school board
- Assign specific responsibilities for planning activities, including the employment of a planning director and/or the appointment of a planning team
- Provide resources for the planning staff or team, an information collection system, and other support activities essential for comprehensive planning

The planning team

- Involve representative groups of educators (principals, teachers, supervisors), laymen, and students in the development of the several components of the plan
- Develop individual components of the plan

Processes for Completing a Plan for Accountability

Step one - Status Study

A. Collect all information necessary for determining how well a school system is doing with its current program. Though information needs may vary among school systems, the following are basic:

- Relevant data on achievement and potential of students, as well as other data about students
- Priorities and constraints established by the State Board of Education, the State Superintendent, the local school board and the local superintendent
- Available staff and other human resources
- Funds available in projected budget
- Educational trends at national, state, and local levels
- Recommendations of advisory councils, professional organizations, and other groups
- Directions from federal, state, and local governmental agencies
- Expectations of the general public
- Evaluation summaries of previous programs and activities

B. After collecting this information, analyze the data and write a brief statement relative to current status and needs. This report should include such items as:

- Strengths and weaknesses of the current program
- Needs
- Individuals to be served
- Human and physical resources
- Limitations and constraints

Step two - Mission Statement

Develop a brief statement (25 words or less) representing the central and continuing purpose of the school ysstem. An example of a mission statement of a school system follows:

The mission of the _____School System is to insure learning for all students, consistent with their needs, interests, and abilities so that they can function in a productive manner satisfactory to themselves and society.

Step three - Continuing Objectives

Develop a list of 10 to 15 timeless, usually non-measurable, philosophical statements which describe the conditions that will exist when the school system is accomplishing its mission. This list should constitute goals for all students and, like the mission statement, should provide direction for educational activities. Examples of continuing objectives are:

- Students will be able to communicate effectively.
- Students will understand the rights and responsibilities of citizenship and effectively demonstrate them.
- Students will find school satisfying and will develop an appreciation for learning and a personal commitment to learning.

Step four - Priorities

On the basis of the status report, list needs in priority order. The rationale for selecting priorities should also be included.

Step five - Specific Objectives

In light of needs, continuing objectives, resources, and other factors, write specific objectives for each program. A specific objective is a statement of desired results written in terms of measurable student performance. For each objective, the following questions should be answered:

Who?
Who are the individuals whose behavior we wish to change?

What?
What is the specific behavior desired?

When?
When will the desired result be accomplished?

How?
How does one measure the accomplishment of the desired results?

Listed below are suggested guidelines for writing specific objectives:

(1) The time necessary for accomplishing the objectives may extend over a period of three years.

(2) Convenient grade levels where testing programs are in operation may be selected for continuing programs. Reading and mathematics are examples of programs which begin in the first grade and may continue throughout high school.

(3) The specific objectives developed for a school system should reflect progress for the entire school system in major program areas as follows:

- A minimum of two objectives each in reading and computation should be written to indicate progress for the elementary and secondary levels.

- Objectives should be written in each of the following disciplines or categorically funded areas:

  - Health and physical education
  - Career awareness and vocational education
  - Science
  - Cultural arts
  - Social studies
  - Specific subject areas at the secondary level
  - Special experimental programs
  - Special programs for exceptional children

(4) Additional objectives should be developed in each of the following affective areas:

- Citizenship
- Attitude toward school and learning (drop-out)
- Self-concept
- Human relations

The following are examples of specific objectives:

- By June, 1972, 80% of the students in grade 8 will be achieving at their projected grade level expectancy on computational skills as measured by the Iowa Test of Basic Skills.

- By June, 1973, 90% of the students in grade 6 will demonstrate one academic year's progress (vs. June, 1972) in vocabulary and reading comprehension as measured by Reading Test in the California Achievement Battery.

- By June, 1974, all students will demonstrate improved human relations by a 50% decrease in the number of incidences of student unrest as compared to the number in 1973.

- During the 1972-73 school year, five classes of randomly selected students enrolled in an experimental mathematics will perform significantly better (.05 level of significance) on the mathematics section of the California Achievement Test (administered on a pre-post basis) than a comparable group of students enrolled in traditional classes.

Step six - Strategies

Select and identify strategies which will be implemented in order that the local unit meet its stated objectives for each program.

Step seven - Evaluation

Formulate evaluation procedures consistent with performance criteria stated in the specific objectives. Although evaluation efforts are a local responsibility, special attention must be given to planning the evaluation so that congruence between the plan processes and outputs and the actual achieved processes and outputs can be made. Checking for this congruence between the plan and actual accomplishments will be an SEA responsibility. If special information must be collected or if unique instruments have to be designed, the needs should be described in the plan.

Step eight - Budget

Develop a budget by program area which includes the cost of each strategy necessary for implementing the program area.

The Two Phases for Implementing the Accountability Model

The following two phases constitute implementation of the accountability model.

Phase I: Reviewing The Plan

LEA's which wish to become accreditated by the State Education Agency will receive the guidelines and manuals which show the format for developing a plan for the LEA. With technical assistance from the State Education Agency they will develop a plan for their unit. The plan will be reviewed by a State Accreditation Committee, and at the time the initial plan is being reviewed, a decision will be made as to which objectives must be met before accreditation can be granted. In terms of flexibility appropriate to each school system, determination shall be made concerning the attainment of objectives not declared mandatory. The approval of the LEA plan by a State Accreditation Committee will lead to tentative accreditation. This LEA plan will serve as a criterion against which the LEA will be judged for accreditation.

Membership on the State Accreditation Committee will be as follows:

- Members will be appointed by the State Superintendent.
- Membership should be between five and ten members.
- Membership may be composed of State Department of Public Instruction personnel, local laymen and governmental officials, local high school students, and teachers and administrators not associated with the local school system being evaluated.
- Representatives of both sexes and minority groups should be on the team.

An Evaluation Team will assist the LEA in collecting and analyzing data to be measured against the specific objectives of the plan.

Membership on the Evaluation Committee will be as follows:

- Members will be appointed by the State Superintendent.

- Membership should be between three and five members.
- Membership may be composed of personnel from the State Department of Public Instruction, colleges and local school system not involved in the particular evaluation.
- No member from the local school system being evaluated should be a member of the evaluation team.
- Membership should be composed of individuals with backgrounds in planning and evaluation.

Phase II: Determining Congruence Between The Plan And Its Implementation

The State Accreditation Committee will predetermine the proper intervals (based on the overall LEA plan) for periodic investigation by the LEA of the students' learning progress during the implementation of its accountability model. At these times the Evaluation Team and the State Accreditation Committee together will review the results of the investigation to determine whether the results reflect adequate progress toward the unit's stated objectives. The State Accreditation Committee may make recommendations to improve progress if necessary. These procedures will be followed during the initial year of plan implementation, the next year (on which accreditation will be based), and each subsequent year.

At the end of each subsequent three-year period, the State Accreditation Committee will determine the accreditation status of the LEA (yes, no. conditional) for the next three-year period.

Suggested Criteria for Evaluating Plans Submitted by School Systems

The evaluation team which reviews the plan submitted by the local school system has the authority to negotiate the appropriateness of specific objectives and the evaluation design developed by the sysstem with local personnel. The team, however, does not have the authority to direct the school system to change other components of its plan, though recommendations by the evaluating team should be encouraged. Recommended criteria for reviewing the objectives and the evaluation section of a plan follow:

1. Are the objectives related to identified needs?
2. Are the objectives written in specific measurable terms?
3. Do the objectives reflect overall student progress in major program areas at specified grade intervals?
4. Are the objectives based on reliable baseline data and realistic estimates of projected student performance?
5. Do the objectives reflect significant gain on the part of students?
6. Is the evaluation design defined in specific terms?
7. Does the evaluation design provide for collecting information that will provide valid measure of purpose?
8. Does the evaluation design insure that the school system will know whether objectives have been met?
9. Does the evaluation procedure include controls that insure objectivity?

Summary

A. Steps Local School System Must Take to Become Accountable

1. Inform State Department of intentions to seek accreditation; request the assignment of an advisor
2. Review the requirements for becoming accountable
3. Request the appointment of an Accreditation Committee that will be responsible for reviewing the school system's plan and ultimately for determining whether the school system meets its objectives
4. Develop a comprehensive plan for the school system
5. Submit the plan to the Accreditation Committee for review and approval
6. Implement plan
7. Arrange for review by Evaluation Team
8. Publicize findings and submit them to Accreditation Committee
9. Receive recognition and accreditation

B. Steps State Agency Must Take in the Accreditation Process

1. Appoint advisor to local school system seeking accreditation
2. Organize Accreditation Committee
3. Review the school system's plan and negotiate with the local personnel concerning objectives and evaluation procedures
4. Approve plan
5. Advise LEA personnel during implementation period
6. Analyze results submitted by the Evaluation Team
7. Award State accreditation
8. Assist the LEA in negotiating with the Southern Association of Schools and Colleges for regional accreditation

APPENDIX A

STATEMENTS ON ACCOUNTABILITY

STATEMENTS ON ACCOUNTABILITY

Leon M. Lessinger: "Essentially, accountability means that schools:
(1) Set goals of concrete, measurable improvements in pupil performance;
(2) Subject results to an objective audit or evaluation; and
(3) Report results to the public in clear terms."

"Accountability is a process in which an agent, public or private, entering into a contractual agreement to perform a service, will be held answerable for performing, according to agreed upon terms, within an established time period, and with a stipulated use of resources and performance standards."

"Accountability means the ability to deliver on promises."

Plutarch (2000 years ago): "Such fathers as commit their sons to tutors and teachers, and themselves never at all witness or overhear their instruction, deserve rebuke, for they fall far short of their obligation. They ought themselves to undertake examination of their children every few days and not place their trust in the disposition of a wage earner; even the latter will bestow greater care on the children if they know that they will periodically be called to account. Here the witty saying of the hostler is apt: Nothing fattens the horse so much as the king's eye."

President Richard M. Nixon: "School administrators and school teachers alike are responsible for their performance and it is in their interest, as well as in the interest of their pupils, that they be held accountable."

John W. Gardner: "The final justification of all the lofty educational policy, all the organizational efforts, is that somewhere an individual child learns something that he might not have learned, or grows in understanding, or gains in skill or insight."

Ewald B. Nyquist (New York State Commissioner of Education): "Accountability is a continuous willingness to evaluate education, to explain and interpret the results with all candor, to divulge the results to the publics or constituencies that need to know them, and to be personally and organizationally responsible for the weaknesses as well as the strengths revealed."

Don Davies (Associate Commissioner, U. S. O. E.): "Accountability means, in effect, that schools and colleges will be judged by how they perform, not by what they promise. It means that we are moving in a direction we have been contemplating for a long time--shifting responsibility from the student to the school. It also means that a lot of people are going to be shaken up."

Russell Peterson (Governor of Delaware & Chairman of the Education Commission of the States): "Accountability involves making what the student learns, rather than what the teacher teaches, the educational objective and thus the basis for measurement."

Anna L. Hyer (Director of the NEA's Educational Technology Division): "Accountability is a concept that involves agreeing upon objectives, deciding upon the input to achieve the objectives, and measuring the output to see the degree to which the objectives have been met."

John W. Porter (Michigan State Superintendent of Public Instruction): Accountability is the guarantee that all students, without respect to race, income, or social class, will acquire the minimum school skill necessary to take full advantage of the choices that accrue upon successful completion of public schooling, or we in education will describe the reasons why.

Myron Lieberman (Professor, City University of New York): "If the public schools do not develop acceptable criteria and procedures for accountability, they will stimulate the emergence of accountability through alternative school systems; i. e., the voucher system. To put it bluntly, if school systems do not begin to do a better job of relating school costs to educational outcomes, they are likely to be faced with a growing demand for alternatives to public schools. These alternatives may not be better--and may even be worse than the public schools. Nevertheless, it is difficult to see how public school educators could argue this point effectively unless they develop more effective ways of being accountable to their patrons."

Raymond Bernabei (Bucks County, Pennsylvania Schools): "Accountability is a logical and systematic method for collecting information of educational growth of pupils K-12 (or any target area thereof) so that educators may retain, redo, or eliminate educational programs being taught."

Bernard Asbell: "Accountability means payment for service when it is satisfactorily delivered."

National School Public Relations Association: "Decide what you're going to do. Do it. Then prove you've done it."

APPENDIX B

SPECIFIC PROJECTS IN ACCOUNTABILITY

NOW UNDERWAY IN NORTH CAROLINA

Specific Projects in Accountability Now Underway in North Carolina

Seven specific projects relative to accountability are currently being emphasized in North Carolina: four of these were made possible with state development funds, designed for encouraging innovative projects. The overall program, known as SEED (State Experimentation in Educational Development), seeks, through limited funding, to encourage viable experimentation in areas regarded as vital for the continuing improvement of education throughout the State. These projects include the following:

- A Dialect Approach to Accountable Performance in Communicative Arts
- Performance Accountability in Reading
- Accountability Through Individualized Instruction
- Performance Accountability at Brevard Senior High School

Three projects relating to accountability are currently in operation through funds made possible through Title III:

- Accountability in Primary Reading Education
- Performance Accountability in Reading
- Accountability: An In-House Approach

Projects Related to Accountability Sponsored by SEED (State Experimentation in Educational Development)

Alamance County

"A Dialect Approach to Accountable Performance in Communicative Arts"

This project seeks to structure a program of accountability through communication skills. The key concepts of this project are the use of multi-media concepts and each child's dialect. Through this departure from the "basal approach, student and teacher success will be measurable."

Activities include:

- reexamination of the testing program
- establishment of guidelines for performance accountability
- writing objectives in the communicative arts

Children in grades 2-4 are involved in this program.

Cleveland County

"Performance Accountability in Reading"

An individualized, nongraded reading program has been set up in grades 1-2 using teacher aides, parents as tutors, and college students as interns. The effectiveness of teachers in raising the reading levels of the elementary children is being measured against behavioral objectives selected by the teachers.

Durham City

"Accountability Through Individualized Instruction"

Through controlled exercises in one elementary school, this project will establish a model program of student and teacher accountability with particular emphasis devoted to knowledge, abilities, and skills in reading and language arts. Results of intensive studies of backgrounds and performance levels of teachers and students will form bases for the development of programs of individualized instruction planned and conducted to enhance achievement of objectives. Included among the principal activities are:

- A minimum of two parent-teacher conferences with the parents of each student during the year
- Maintenance of a continually updated "Individual Contact File" noting the needs and achievement of each student
- School coffee hours to provide opportunities for parents and teachers to collectively enhance their specific knowledge of ways in which they can help children learn

Transylvania County

"Performance Accountability at Brevard Senior High School"

The project is designed to develop performance accountability in all major subject areas of a high school curriculum. Realistic and measurable individual objectives, cooperatively determined by selected students and their teachers, will focus upon relevant and functional activities. Through the process of developing and understanding of performance objectives and the use of such objectives, it is anticipated the drop-out rate, failures, and similar problems will decrease.

Projects Related to Accountability Made Possible Through Title III

Burlington City

"Accountability in Primary Reading Education"

The purpose of this project is to design an accountability process by means of a reading program for children in the primary grades of three schools. Continous measurement of each child's progress will be kept by teachers, but the school system -- not the teachers -- will be held accountable for student performance and the success or failure of the program.

Kinston City

"Performance Accountability in Reading"

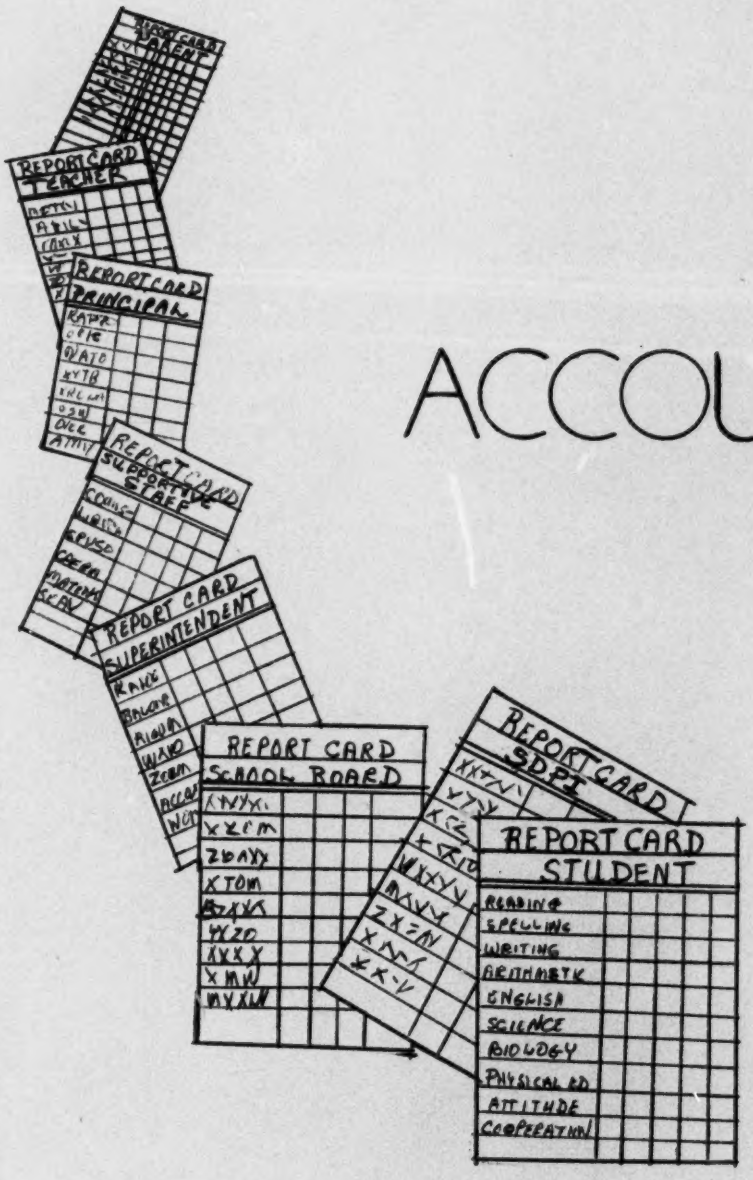
Project "PAR," through an accountability program in reading, intends to upgrade the reading skills of all students in grades 1 and 2 in the Kinston administrative unit. By the use of individually prescribed instruction in reading, the project emphasizes the aspects of motivating the child to enjoy

reading, and thus to read more.

Roanoke Rapids City

"Accountability: An In-House Approach"

This performance accountability project attempts to hold teachers responsible for the performance of their pupils. A supplement is paid to teachers whose pupils achieve beyond projected levels in language arts (including reading), mathematics, science, and social studies. Performance contracts are made with teachers and consultants.



ACCOUNTABILITY

Appendix C

A Review of Literature on Accountability
Prepared by Barbara Crevar & Brenda Phelps
Research & Information Center
North Carolina State Department of Public Instruction

May 1972

OPEN LETTER

Mr. Doug Matic, Superintendent
Post View School District
Hometown, U.S.A.

Dear Mr. Matic:

In the past years I have spent a great deal of time and energy bringing to the attention of the American public deficiencies in the products of our business world. It has recently come to my attention that the "education business" is larger and more extensive than GM and Ford combined! In addition, it is clear from a brief initial survey that most of your products are poorly constructed, contain shoddy workmanship, and in many cases are hazardous to the well being of society. In an examination of public school products, they were found to have the following defects:

1. A majority of the units read poorly and cannot do simple math.

2. Almost all units dislike reading and math.

3. Almost all units dislike school, teachers and principals.

4. Few units, if any, are in a condition to start work directly off the assembly line.

5. Almost half of your products are rejected as defective before completion.

6. Almost all units have lost their love of learning.

7. Most units have a poor understanding, and almost all have no practice in democratic principles and actions.

We cannot understand this product performance, because your raw materials come to you in splendid form. Almost every unit has learned to talk (a very difficult feat) by himself; almost every unit loves to learn new things; almost every unit looks forward to learning in school; almost every unit has a fantastic capability to learn. We cannot justify your product performance, especially in the light of your production schedule. What other business spends eight hours a day, five days a week, 36 weeks a year, for 12 years, working on a product? This is ample time to produce a high quality, finished unit.

OPEN LETTER (Continued)

In two weeks I am sending three of my "raiders" to your school for a product audit. Since you are a public institution, my staff will expect you to make available to them:

1. Complete financial records for your products and complete performance records of them.

2. Complete statements of your product goals and objectives, statements of how you intend to reach these goals, and statements on how you know when your product is completed.

3. A listing of your product defects and your procedures for correcting your mistakes.

4. Free access to your workers and products, so we can assess their feelings and their likes and dislikes concerning your school.

Don't try to bull my "raiders" into looking at buildings, grounds, new classrooms, swimming pools, the football stadium, or the new auditorium. Don't give us your rhetoric of office. Your company will be judged only on the basis of your product and the cost of producing that product.

Following our educational audit I will be placing your company on public record. I will compare your raw materials with your finished products. I will compare football expenses with reading program expenses. I will compare the salaries of your workers to determine if top learning priorities are being supported. I will examine the lives of your rejects. I will compare your actions with your words.

Get ready. I am coming.

Sincerely yours,

/s/Ralph Rader

(A copy of the above letter was forwarded to this magazine by Paul Geisart of the Science and Mathematics Teaching Center, University of Wyoming, Laramie, Wyoming.)

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Research & Information Center
State Department of Public Instruction
Raleigh, North Carolina 27602

April 1972

SELECTED ERIC DOCUMENTS

ON

ACCOUNTABILITY

From: Research in Education, 1970-72

(Note: These ERIC documents can be read in full or ordered on microfiche from the Research & Information Center; State Department of Public Instruction; Room 581, Education Building; Raleigh, N. C. 27602.)

Bhaerman, Bob. A PARADIGM FOR ACCOUNTABILITY. (QUEST paper 12). Washington, D. C.: American Federation of Teachers, 1970, 10 p. (ED 041 870)

A design is proposed which would unite the elements of teacher evaluation, differentiated staffing, and inservice education into continuous progress plan, in which teachers would undergo continuous growth experiences and assessment to prepare them for a variety of horizontally differentiated roles. In this way all aspects of a teacher's role--verbal behavior, personal characteristics, and subject matter knowledge--would assume equal importance, and the devisiveness inherent in an arbitrary designation of vertical levels of staffing would be avoided. This three-way design could make the schools truly accountable to the clients of education.

Bhaerman, Bob. RESPONSE TO LESSINGER: THE GREAT DAY OF JUDGMENT. Washington, D. C.: American Federation of Teachers, 1970, 6 p. (ED 045 568)

Dr. Lessinger's position of accountability (see ED 040 155) seems to be within a very limited view of the function of the school. Not all educators are well adjusted to the status quo; some hold that the school shall build a new social order. Dr. Lessinger seems to say that teachers should be accountable for the training component but not the more important education component. Teachers want to know what he means. Regarding the "basic skills of reading," the issue is not that teachers have failed to teach the basic skills but that they often have not been made aware or given the proper tools, materials, and preservice and in-service training to do the job. The difference between Dr. Lessinger's paradigm for accountability and that in AFT Quest Paper #12 (ED 041 870) is that his is based on the simplistic dichotomy of success or failure whereas ours is based on the more complex notion of identifying teachers' strengths and weaknesses and then establishing continuous progress programs for them. Dr. Lessinger says that the heart of the education engineering process is in the performance contract. AFT teachers have passed a resolution pointing out that performance contracting can take the determination of education policy out of the hands of the public, threaten to establish a new monopoly of education, dehumanize the learning process, sow distrust among teachers, promote teaching to the "standardized" test, and subvert the collective bargaining process and reduce teacher input.

Brain, George B. NATIONAL ASSESSMENT -- EVALUATION AND ACCOUNTABILITY. (Paper presented at National Association of State Boards of Education Meeting.) 1970, 14 p. (ED 046 064)

Most standardized testing programs do not furnish examples of the kinds of information young people actually know. Instead they indicate only (1) how far an individual student is above or below an average score, and (2) the average score of a classroom or a school in relation to others. In contrast, National Assessment evaluates educational changes within the larger population, its purpose being to provide more adequate information about educational quality on a regional and a national basis. Based on a model of statistical sampling similar to public opinion polls, this program describes the knowledge, skills, attitudes, and understandings of groups of persons at the ages of 9, 13, 17, and young adults. National Assessment measures "population knowledge" rather than the knowledge of an individual. Results for science and citizenship show two trends: (1) knowledge of students increases with age, and (2) adults tend to forget much of what they learned in school.

Byrd, Manford, Jr. TESTING UNDER FIRE: CHICAGO'S PROBLEM. Chicago, Illinois: Chicago Board of Education, 1970, 15 p. (ED 047 013)

The history and development of city-wide testing programs in Chicago since 1936 are reviewed and placed in context with the impact on testing of Sputnik and the passage of the National Defense Education Act of 1958. Current testing problems include the time lag between events and curricular changes and new test construction, the time lag between changes in student population and re-norming of tests, comparability of school populations of large cities and norms groups, reinforcement by standardized tests of the concept of a standard as the goal rather than progress, and the failure on the part of the public, despite all efforts to the contrary, to appreciate the importance of the standard error of measurement. Among other issues considered are the problems of cultural differences, the results of deprivation, language difficulties, the use of test results as one method of evaluation in accountability, and calls for a moratorium in testing. Suggested remedies include the construction of better, more relevant tests; more frequent test revisions; more sophisticated understanding, interpretation, and use of test results; periodic review of material entered into a student's cumulative record; moderation of test publishers' oversell; and working together to put standardized testing back into context.

Clark, Phillip I. THE USE, MISUSE, AND ABUSE OF TESTS. New York, N. Y.: Harcourt Brace Jovanovich, Inc., 1970, 35 p. (ED 051 281)

The New England Association for Measurement and Evaluation in Guidance (NEAMEG) Conference on Measurement in Education was designed to (1) provide a forum for the examination and discussion of vital issues related to measurement and evaluation; (2) facilitate communication among educators from various disciplines and levels of education within the New England region, and to encourage their active involvement in "attacking" current identified problems and concerns relating to the use of tests and other evaluative devices; and (3) stimulate the development of a series of position papers stating the views of the professional members of the NEAMEG as a group, which may serve as guidelines for education. The proceedings include: "Innovative Test Usage for Individual Pupil Growth," Philip I. Clark; "National Assessment," Thomas R. Knapp; "State Testing Programs," Paul B. Campbell; "Testing the Disadvantaged," Lenore A. DeLucia; "Computerization in Relation to Testing and Evaluation," James R. Baker; "Testing and Its Relevancy to the Seventies," Thomas Burns; "Federally Funded Programs," Thomas Burns; "Disclosure of Test Results," Thomas P. Nally; "Norms: Fact or Fancy," Walter N. Durost; "Tests: Who or What is Being Evaluated," C. Thomas Skoggs; and "The Jensen Report," Paul B. Campbell. A summary of the discussion by the reactors to each presentation follows each paper.

Clark, Richard; Rosenbach, John. PROGRAM EVALUATORS HANDBOOK: DEVELOPING SOLUTIONS. State University of New York, Albany. State Educational Department. 1969, 60 p. (ED 043 672

Accountability is an outgrowth of rising demands by legislators and taxpayers that programs do actually achieve what they purport to achieve. This handbook is one of six summaries of workshops (See TM 000 138) on the development of solutions for evaluating the effectiveness of educational programs under ESEA Title III at all levels within the State of New York. The first part considers the sources from which solutions might emerge and the translation of ideas into operating programs. Attention then focuses on the analysis of proposed solutions that may show positive effects, as contrasted with those that seem appealing but have little chance of making a real difference. The task of making solutions more relevant to objectives is approached in the reporting of sources of exemplary and innovative programs, relating proposed programs to theory, and the questions to consider in program implementation. An appendix includes the various exercises that were presented; a brief summary, where appropriate, of some of the responses obtained; and an outline of the specific chronology followed during the workshops. Although funded by Title III, the content of the workshop sessions is considered appropriate for use with other Titles and large program evaluative problems.

Culbertson, Jack A. EVALUATION OF MIDDLE-ADMINISTRATIVE PERSONNEL: A COMPONENT OF THE ACCOUNTABILITY PROCESS. (Paper presented at American Association of School Administrators Annual Convention (103rd), Atlantic City, New Jersey, 1971, 11 p. (ED 051 543)

Evaluation systems inevitably reflect the values and aspirations of school districts. These values in turn may reflect either an orientation toward effective handling of the status quo or simply a posture of effective efforts to improve the status quo. Evaluation systems for elementary and secondary principals should be designed with the explicit objectives of stimulating leadership and encouraging improvement efforts.

Duke, W. R. CONTROL OF ACCOUNTABILITY THROUGH PLANNING, PROGRAMMING, BUDGETING, EVALUATION SYSTEMS. (Paper presented at Western Canada Educational Administrators' Conference (Banff, Alberta (Canada), 1971, 18 p. (ED 055 364)

This paper outlines the concept of accountability, presents performance contracting as an external response to accountability, and examines the impact of planning, programming, budgeting, and evaluation systems (PPBES) in an accountable system. The major thesis of the paper is that PPBES assists in controlling accountability by specifying expectations and performance in a manner understandable to the public.

Elliott, Lloyd H. ACCREDITATION OR ACCOUNTABILITY: MUST WE CHOOSE? (Paper delivered at the meeting of the Middle States Association of Collegiate Registrars and Officers of Admission), 1970, 18 p. (ED 047 603)

The author believes the machinery of accreditation has outlived its usefulness. This paper examines the effects of present accrediting activities and the work of regional associations and professional societies on part-time and continuing education. Part-time and continuing education has long been discouraged by the prestigious universities, though the notion of full-time faculty, full-time students, and the community of scholars has in actuality become a myth. Yet these myths are being perpetuated by accrediting teams who have encouraged practices directed against continuing education. Accrediting groups have pressed for greater emphasis on standardized tests for admission, increased efforts at recruitment, broader geographic representation and more financial aid, all aimed at admission and retention of the full-time student. The Commissioner of Education in New York State has proposed the "external degree" which, if accepted, would provide much of the flexibility needed to respond to today's problems and to the demands that our society is making on higher education. Voluntary agencies do not have the authority, nor can they respond quickly enough to the crises faced by higher education, and there is great need for regulation of the educational enterprise by a new administrative agency of the federal government.

EVALUATING COMPENSATORY EDUCATION ACCOUNTABILITY. Baltimore, Maryland: Maryland State Department of Education, Division of Compensatory, Urban, and Supplementary Programs, 1971, 21 p. (ED 047 068)

This booklet comprises excerpts from the proceedings of a conference held in Maryland to explore the related themes of accountability and the evaluation of compensatory education. Participants at the conference were administrators, teachers, aides, and parents who met in small-group work sessions. The conference is judged to have succeeded in stimulating exchanges of ideas and self-examination. In addition, several key concepts are considered to have merged as continuous themes, which should be, it is held, taken into consideration in the design of any ESEA Title I program of compensatory education: (1) basic academic skills, with an emphasis on reading and language arts, must be the focus of Title I programs; (2) the trend in compensatory education programs for the disadvantaged is toward prevention of problems rather than remediation of long-entrenched problems; (3) a comprehensive assessment of the needs of the disadvantaged is essential in preparing Title I projects; (4) the key to meaningful evaluation is in the statement of the project's objectives; and (5) should be expressly and specifically related to the stated objectives and activities of a project.

Farquhar, J. A. ACCOUNTABILITY, PROGRAM BUDGETING, AND THE CALIFORNIA EDUCATIONAL INFORMATION SYSTEM: A DISCUSSION AND A PROPOSAL. Rand Corporation, Santa Monica, California. 1971, 34 p. (ED 050 498)

It has been argued that the answer to public and political demands for a more responsive educational system lies in the practice of accountability. The future implementation of program budgeting may offer an attractive vehicle for accountability. Currently, many California school districts use the California Educational Information System (CEIS) as a primary vehicle for information storage, processing, and retrieval. Although adequate for present needs, CEIS is ill-suited to effective support of accountability and program budgeting. The legislature should create an advisory commission on information systems to define the structure and services of a CEIS II, a statewide information system designed to support accountability and program budgeting. A CEISII would require system definition to determine information needs, transitional mechanisms, legislative and economic frameworks, security and privacy issues, and a functional system design to translate needs into specifications for subsequent programing and testing.

THE FLORIDA PROGRAM FOR IMPROVING THE TRAINING, EVALUATION, AND LICENSURE OF EDUCATIONAL PERSONNEL. Florida State Department of Education, Tallahassee. 1971, 10 p. (ED 055 050)

The program is designed to move the state toward competency-based programs of teacher education, in which program decisions for trainees are made on the basis of demonstration by those trainees of pre-specified competencies. The strategy proposed has two major facets: to provide greater flexibility in the operation of local educational programs and to make local personnel accountable for results. A variety of teacher education programs will be used, and eventually teachers will be required to master only those competencies which have been demonstrated by research to relate to pupil learning. As a first stage, a catalog of teaching competencies will be compiled to serve as a reference for organizing teacher training materials, for analyzing teacher training programs, and for identifying competencies for validation through research projects. Evaluation techniques will be identified or developed which correspond with the specific objectives included in the catalog. A series of research projects are designed to show the relationship between teaching competencies and pupil achievement. The third element in the program is the assembly of protocol materials and materials for training in specific teaching, planning, and supervisory skills; and the final element is the establishment of a statewide program for training teacher trainers.

Forsberg, James R. ACCOUNTABILITY AND PERFORMANCE CONTRACTING. ANALYSIS AND BIBLIOGRAPHY SERIES, No. 13. Oregon University, Eugene, Oregon. ERIC Clearinghouse on Educational Administration. 1971. 15 p. (ED 055 336)

Intended for both researchers and practitioners, this review analyzes literature on educational accountability and performance contracting. It defines the concepts, describes certain individual contracts completed or in progress, discusses the use of management systems and safeguards, identifies some testing and measurement problems, and probes some legal aspects of performance contracting. A 44-item bibliography of relevant literature is included.

Hencley, Stephen P. DETERRENTS TO ACCOUNTABILITY. (Paper presented at Western Canada Educational Administrators' Conference (Banff, Alberta (Canada). 1971. 20 p. (ED 055 365)

This speech assesses potential deterrents to the implementation of accountability in education. The author divides these deterrents into (1) philosophical-ideological; humanist-behaviorist conflicts, individuality versus "techno-urban fascism," and accountability systems tied to the achievement of cognitive objectives at the lower end of Bloom's Taxonomy of Educational Objectives; (2) political-legal, governance problems and the legal capacity of a school board to contract for educational services; and (3) technological-economic, the lack of technologies and financial resources for defining, measuring, and producing learning outcomes.

AN INTRODUCTION TO GUARANTEED PERFORMANCE CONTRACTING: A PLANNING GUIDE. Michigan State Department of Education, Lansing, Michigan. 1971. 57 p. (ED 053 198)

This guide was designed by the Michigan State Department to assist local school district personnel in the use of Guaranteed Performance Contracting (GPC) by providing a framework of suggested procedures.

Simply stated, the guaranteed performance contract means the "leasing out" to a private entrepreneur, an internal group such as a school's professional staff, or an external agency, such as a university or professional organization, certain defined instructional responsibilities in one or more components of the educational program. Other configurations of this activity are a matter of the contractual agreement itself and not an inextricable part of the concept. Guaranteed performance contracting, then, does not necessarily prescribe a type of pedagogy, nor does it insist upon operant conditioning, contingency management, or differential staffing. The contract may simply stipulate that, at a designated future point in time, certain specific pupil achievement gains will be realized and documented--and at an agreed-upon cost per pupil, or no amount of public funds should be paid.

Johnson, Barbara M. ACCOUNTABILITY IN TEACHER TRAINING. San Diego, California: (Paper presented at the Annual Meeting of the California Educational Research Association, 1971, 5 p. (ED 053 179)

This project attempted to combine pre-service methods, student teaching and in-service curriculum improvement. The participants were 18 elementary classroom teachers, 22 college students, 1 Miller-Unruh teacher, 1 Title I teacher, 4 special education teachers, and a principal. The college students were assigned to one elementary (K-8) school for one semester all day, every school day. They were enrolled for a 3-unit curriculum course. One of the main objectives of the project was to demonstrate that curriculum study and improvement can be effectively accomplished by intensive introspection on the part of a staff for the purpose of explaining and instructing teacher training candidates. Conversely, it was held that the college students in pre-service training would be effectively trained if their experiences were comprehensive and genuinely related to and included actual teaching. Pre and post evaluations were done using standardized and informal instruments. Results were significant. Other, more subjective evaluations were done on proficiency in the teaching of subjects and skills. These results were also highly positive. It is concluded that institutions that participate in teacher training must be responsible for the exploration and initiation of options for more involved, comprehensive programs.

Johnson, Mae C. ACCOUNTABILITY: TO WHOM? FOR WHAT? College Park, Maryland: Maryland University, 1971, 101 p. (ED 055 753)

The addresses and discussions of the 1970 Maryland Reading Institute focused on the theme of "accountability" -- defined as the responsibilities of teachers to their students, community and society. In Part 1, highlights of the keynote address are followed by summaries of a five-member panel discussion, five reactors' statements, and a concluding address. Reading educators were seen as responsible for providing a solid basis for all education. In addition, because of the wealth of recent research on the reading process and the learning-to-read process, the teacher of reading has the responsibility to learn as much as possible in her field and apply her knowledge in the classroom. On another level, programs in colleges and universities must supply future teachers with training in teaching reading skills and in the development of effective reading curricula. The second part of this volume includes an address by Kenneth Goodman entitled "Psycho-linguistics and Reading" and summaries of speeches on reading and learning centers, teaching values in elementary social studies programs, and our responsibility to children.

Klein, Stephen P. THE USES AND LIMITATIONS OF STANDARDIZED TESTS IN MEETING THE DEMANDS FOR ACCOUNTABILITY. (UCLA EVALUATION COMMENT, JANUARY, 1971.) Los Angeles, California: University of California, 1971, 20p. (ED 053 175)

The two major demands of "accountability" as it relates to performance contracting are to provide a valid system of assessing student performance and to provide a fair system for paying the contractor. The four major limitations of existing standardized tests in meeting the first of these two demands are (1) likelihood of poor overlap between the test's and the school's objectives and the priorities associated with these objectives, (2) inappropirate test designs and formats for the target populations, (3) difficult and confusing test instructions and administration procedures that introduce irrelevant factors into a student's score, and (4) low test validity in the sense that the tests do not really assess the kinds of student skills and abilities that their titles imply they do.

Among the important implications of these limitations are (1) reduction of the value of standardized tests as a basis for a fair payment system, (2) alienation of educators from the principles of accountability, since educators are responsible for improving student performance on irrelevant measures and, finally, (3) reduction of the test's sensitivity to the point that it is almost impossible to identify just which educational programs are really making positive contributions. The nature of most performance contracts and their reliance on standardized test scores and average grade-norm changes further reduces the effectiveness of applying accountability principles. The reason for this is that such contracts often fail to handle important technical problems associated with measuring actual and relevant gains in student performance.

The solution to these problems does not lie solely in finding better ways to use existing measures. It must also include improvements in test formats, instructions, content and administration procedures, as well as in methods for interpreting test results.

Kruger, W. Stanley. IMPLICATIONS OF ACCOUNTABILITY FOR EDUCATIONAL PROGRAM EVALUATION. Chicago, Illinois: (Paper presented at the Invitational Conference on Measurement in Education, University of Chicago), 1970, 14 p. (ED 043 665)

The concept of accountability in education has two primary concerns: the responsibility to provide effective educational programs and the responsibility to employ efficiently the resources allocated for this purpose. These concerns are fundamental to an evaluation procedure based on the principle of accountability. The establishment in 1967 of new federal programs in Bilingual Education and Dropout Prevention provided the vehicle for an effort to establish accountability principles. Ten critical factors of program design, operation and management which could expand the dimensions of accountability were identified: community involvement, technical assistance, needs assessment, management systems, performance objectives, performance contracting, staff development, comprehensive evaluation, cost-effectiveness and program audit. Their implications for program evaluation are discussed.

Larson, O. P. INCREASING ACCOUNTABILITY THROUGH INVOLVEMENT OF PROFESSIONAL AND LAY GROUPS. Banff, Alberta: (Speech given before Western Canada Educational Administrators' Conference), 1971, 24 p. (ED 055 360)

This speech outlines the purposes to be served by increased professional and lay participation in decisionmaking at school and systemwide levels. The author suggests (1) a committee structure designed to facilitate increased participation by professional and lay personnel, and (2) some methods for involving professional and lay personnel at both the system-wide and school levels.

Lennon, Roger T. ACCOUNTABILITY AND PERFORMANCE CONTRACTING. New York, New York: (Speech presented at American Educational Research Association Annual Meeting), 1971, 21 p. (ED 049 520)

This report defines the concepts and some of the problems of accountability and performance contracting with special emphasis on measurement problems in the latter. Measurement problems involve both the validity and the reliability of standardized achievement tests as a basis for reimbursing a contractor. The author suggests the use of criterion referenced tests as a possible remedy to some of these problems, but cautions that results should be translatable into units that will yield measures of gain or growth. Related documents are EA 003 347, EA C03 356, EA 003 391, and EA 003 387.

Lessinger, Leon. ENGINEERING ACCOUNTABILITY FOR RESULTS INTO PUBLIC EDUCATION. Washington, D. C.: U. S. Office of Education, 1970, 32 p. (ED 040 155)

"Accountability" is a classical term in management theory, but new in education. It is the product of the process of performance contracting, in which a public authority grants money to a local educational agency to contract with private enterprise to achieve specific goals within a specific period for specific costs. This process can be engineered as follows: (1) the local educational agency employs a management support group; (2) the MSG works with other groups to produce a set of general specifications called a Request for Proposal; (3) the RFP is the subject of a pre-bidding conference; (4) the revised RFP is issued and actual bids are entertained; (5) the local school board selects the best bid and negotiates a performance contract with the aid of the MSG; (6) the local education agency employs an Independent Educational Accomplishment Audit team to monitor execution of the performance contract and to certify results for purposes of payment. The Texarkana Dropout Prevention Program under ESEA Title VIII was the first to use performance contracting in education and it stimulated numerous inquiries and proposals from other cities. This new approach requires increased flexibility in funding, which could be achieved by greater local control.

Lessinger, Leon; and others. NAPPA PAPERS ON ACCOUNTABILITY: TO WHOM, FOR WHAT, AND BY WHAT CRITERIA? Indianapolis, Indiana: National Association of Pupil Personnel Administrators, 1970, 28 p. (ED 053 417)

These three papers explore accountability in education: implications for guidance workers; accountability -- to whom, for what; and accountability from the point of view of a chief administrator. The first paper promotes a four step action plan to help the practitioners of guidance "get their house in order": (1) balancing burdens with capabilities; (2) stating these burdens in comprehensible language and then plunging into the derivation of objectives reflecting specific behavior; (3) identifying criteria measures for evaluating progress toward objectives; and (4) discovering alternate, cost effective strategies for reaching the stated goals. The second paper proposes the thesis that accountability suffers from the same ills as American education -- white control, and advocates that minorities become involved in community control and participation in their children's schools. The final paper asks 4 questions regarding counselors and accountability: (1) do kids find counselors helpful? (2) can we get the psychologist to become a practitioner, not a paper-pusher? (3) should counselors spend time with both normal and problem children? and (4) shouldn't we offer counseling and tangible suggestions rather than nothing at all?

McDowell, Stirling. ACCOUNTABILITY OF TEACHER PERFORMANCE THROUGH MERIT SALARIES AND OTHER DEVICES. Banff, Saskatchewan: (Speech given at the Western Canada Educational Administrators' Conference, 1971, 11 p. (ED 055 989)

The document offers two definitions of accountability, a narrow one in which the teacher's salary must be based entirely upon a measurement of his teaching competence, and a broader one in which salary is related only partly to a measurement of competence. The major points for and against merit ratings are summarized, followed by a description of the requirements for a successful plan, including the prerequisite conditions of acceptance, mutual confidence, participation, and research; a validated and continuous evaluation system; and a basic scale of salaries which adequately reflects the importance of teaching. The wider acceptance of merit rating plans in the United States than in Canada is considered, as well as the probable cost of such a program, which has been estimated at an additional 18 percent of payroll. The philosophical problem raised by merit rating is due to the conflicting views of the school system as a bureaucracy or as a profession. If the teacher is to be rated by someone else, he cannot retain his professional autonomy. The Saskatchewan Teachers' Federation has developed a program of teacher accreditation by subject, based on the belief that in accepting the authority for program modification and student evaluation the teacher is also undertaking the responsibility to defend what he is doing and why he is doing it.

Merriman, Howard O. CASE STUDY OF AN ACCOUNTABLE SCHOOL DISTRICT. Atlantic City, New Jersey: (Speech given before New Jersey School Boards Association annual workshop), 1971, 25 p. (ED 055 361)

This speech traces the inception and the operation of an accountability program in the Columbus, Ohio, public schools. The need to comply with the mandated evaluation requirement of ESEA Title I programs and to respond to a demand from the educational community that they be advised of the progress of these programs alerted the Columbus public schools to the fact that their system lacked proper performance evaluation tools. The evaluation of these programs was contracted, therefore, to the Ohio State University Evaluation Center. The speech explains how the evaluation center has operationalized accountability and presents the policies, processes, and produce of the evaluation effort.

PROCEEDINGS OF THE CONFERENCES ON EDUCATIONAL ACCOUNTABILITY . Princeton, New Jersey: Educational Testing Service, 1971, 108 p. (ED 050 183)

Considerable attention is being focused on the concept of educational accountability. The word "accountability" has connection with such activities as assessment, evaluation, auditing, and performance contracting. These conferences, held in Washington, D. C. and Hollywood, California, were the result of expressed concern for more to be said about an area in which there is so much interest and a growing need for clarification of the many issues and problems involved. The nine papers presented were organized under six main topics and are concerned with the philosophy, strategies and pitfalls of accountability in education. Each provides a substantive and challenging contribution to the understanding of what is involved in developing and implementing accountability programs of integrity and merit. Topics and speakers were: "Means and Ends of Accountability" (Terrell H. Bell); "Issues in Implementation" (Nolan Estes and Donald R. Waldrip; Robert W. Locke); "Possible Effects on Instructional Programs" (Albert Shanker); "Public Expectations" (Wilson C. Riles; H. Thomas James; Scarvia B. Anderson); "The Role of Evaluation" (Henry S. Dyer); "The Future of Accountability" (John W. Porter).

PROCEEDINGS OF THE CONFERENCE ON EDUCATIONAL ACCOUNTABILITY. Princeton, New Jersy: Educational Testing Service, 1971, 67 p. (ED 051 313)

The philosophy, strategies and pitfalls of educational accountability, and information on the development and implementation of accountability programs are outlined in this conference report. Educational accountability is a term used in connection with activities such as assessment, evaluation, auditing, and performance contacting. The speakers' papers include: "The Means and Ends of Accountability" (Erick L. Lindman); "Issues in Implementation I" (Mark R. Shedd); "Issues in Implementation II" (Francis Keppel); "Public Expectations" (James E. Allen, Jr.); "The Role of Evaluation" (Henry S. Dyer); and "The Future of Accountability" (Edythe J. Gaines).

Rhodes, Lewis A. EDUCATIONAL ACCOUNTABILITY; GETTING IT ALL TOGETHER. (Background paper for seminar on accountability of the Annual Texas Conference for Teacher Education). 1970, 14 p. (ED 045 566)

Some form of accountability for what comes out of schools is increasingly demanded. The cause-effect or means-end relationship assumed to underlie most institutional management strategies must be reexamined since the educational system must assure that individuals can cope with and profit from the other "teaching experiences" in the world around them. While advances in knowledge and technique make possible an institution where individual learning can be facilitated and assured, it is difficult for people to believe it possible since few have had the practical experience of managing resources to that end. The needed management procedures exist today -- a goal-directed management process which permits both the present and desired operation of a school to be viewed from a common frame-of-reference focused on the learner. Implementation of an institutional policy of accountability -- as a managerial ethic -- must take into account the reality that educators have little control over many external factors affecting individual learning. The educational management process (in which administration is not considered as a function apart from teaching) is a continuing information feedback mechanism which holds the professional educator responsible or accountable, not for the discrepancies, but for doing something about them with the information provided. A policy of total institutional accountability can provide a management framework in which both the process and product can be perceived and dealt with together.

Saretsky, Gary; and others. ACCOUNTABILITY, A BIBLIOGRAPHY. Bloomington, Indiana: ERIC Clearinghouse on Reading, 1971, 16 p. (ED 055 757)

Approximately 225 citations of books, journal articles and conference proceedings dealing with accountability are listed. The bibliography is subdivided into twelve categories -- general, technical assistance, needs assessment, management systems, change strategies, performance objectives, performance budgeting, staff development, comprehensive evaluation, program auditing, community involvement and cost effectiveness. A general bibliography follows with articles discussing measures of accountability, general statements on accountability and cost-benefit analysis of education and instructional technology. Most of the titles listed were published since 1965.

STATE EDUCATIONAL ASSESSMENT PROGRAMS. Princeton, New Jersey: Educational Testing Service, 1971, 100 p. (ED 056 102)

A summary of the educational assessment activities (as of early 1971) in each of the fifty states and District of Columbia is given. Information was gathered through interviews held in each state by staff members of ETS. Similarities in the activities of many states include the setting of statewide educational goals, application of a planning-programming-budgeting system to educational assessment, establishment of statewide testing programs, assessment of non-cognitive development, measuring various influences on learning, influence of the National Assessment Model, and a trend toward more centralized control of programs. Problems generally concern a lack of communication and coordination, relation of assessment data to financial incentives, the handling of sensitive data, and confusion and conflict about goals.

Stufflebeam, Daniel L. CRITIQUES OF THE REPORT OF THE PHI DELTA KAPPA STUDY COMMITTEE ON EVALUATION. New York, New York: (Paper presented at the Annual Meeting of the American Educational Research Association, 1971, 59 p. (ED 056 074

An evaluative symposium conducted during the 1971 Annual Meeting of the AERA offered the following critiques on "Educational Evaluation and Decision Making," a book prepared by the Phi Delta Kappa Study Committee on Evaluation: "A Critique of the Report of the Phi Delta Kappa Study Committee on Evaluation" (Henry M. Brickell); "A Critique of the Measurement and Instrumentation Aspects of 'Educational Evaluation and Decision-Making'" (William B. Michael); "Evaluation: Noble Profession and Pedestrian Practice" (Michael Scriven); "Determining 'Most Probable' Causes: A Call for Re-examining Evaluation Methodology" (James L. Wardrop).

Unks, Nancy J.; Cox, Richard C. A MODEL FOR THE EVALUATION OF A TESTING PROGRAM. Washington, D. C.: Research For Better Schools, Inc., 1968, 7 p. (ED 036 190)

The evaluation of a testing program is necessary before or during a sound total project evaluation. Ideally, the testing program study should be concurrent with, and equal in magnitude to, the total project evaluation. Step one in an evaluation is to define the testing program's objectives in operational terms. Step two is a thorough description of the innovation to be studied. Then the evaluation program should examine the instruments used to conduct tests, obtaining validity, reliability, and item analysis data for all such instruments. A summary is then made which interprets the information accumulated in the first three phases. A diagram of such an evaluation procedures is presented.

Wear, Maurice; Basom, Myron. ACCOUNTABILITY IN EDUCATION. Laramie, Wyoming: University of Wyoming, 1970, 89 p. (ED 055 359)

This publication represents the combined efforts of the participants in a workshop held at the University of Wyoming. The writings discuss accountability at the national, State and local levels and explain the application of planning, programing and budgeting systems to the accountability concept. The report represents methods for evaluating both schools and their staffs as means for implementing an accountability system. Appendixes include a paper explaining performance evaluation, a list of internal and external evaluation guides, and a bibliography of evaluation criteria materials.

Wescott, J. P. ACCOUNTABILITY AND MANAGEMENT. Roanoke, Virginia: (Speech given before Southern Association of College and Schools annual conference), 1971, 15 p. (ED 055 318)

This speech describes accountability as the matching of intent to results and explains the utility of planning, programing, budgeting systems in implementing an accountability policy in school systems.

Westcott, Renee P. A HUMANISTIC APPROACH TO ACCOUNTABILITY IN READING INSTRUCTION. Milwaukee, Wisconsin: National Reading Conference, Marquette University, 1971, 11 p. (ED 056 851)

Accountability can be applied to reading instruction by matching instructional intent to the results in terms of observable learner accomplishment. An approach to accountability, based on Bloom's concept of student mastery of subject matter, consists of six components which the student passes through in the reading instructional process: (1) rationale: the learner perceives the importance of instruction to his own needs and goals; (2) diagnosis: pre-evaluation helps determine the learner's abilities and subsequently, the learning objectives he needs to pursue; (3) objectives: specific performances are outlined to show the student what the instruction will teach; (4) alternate learning activities; a variety of methods, media, levels, and types of learning activities are employed to suit instruction to the student; (5) post-evaluation: to inform the student and the instructor whether instruction has succeeded in enabling the student to intentions to be reciprocated. The findings showed that both O's intent and the learning activities are modified according to feedback from the learners. In this program, individualized segments are short, learners can take as much time as necessary to master the objectives, and instruction is char terized by appropriate practice, positive reinforcement, and immediate knowledge of results. References are included.

Wilson, Donald F. THE PRACTITIONER AND ACCOUNTABILITY. Atlanta, Georgia: (Speech presented at National School Boards Association Annual Meeting,) 1971, 11 p. (ED 049 528)

This paper discusses the role of the classroom teacher under an accountability program, and raises questions about the extent to which teachers can be held accountable in different areas of school programs. The author defines issues raised at the ACT national study conference on accountability in education, and enumerates responsibilities of teachers in subject matter knowledge, pupil development and curriculum selection. The author concludes that teachers, through their professional associations, should become more involved in decisionmaking on performance contracts. Related documents are EA 003 347, EA 003 356, EA 003 358, EA 003 387 and EA 003 391.

Wohlferd, Gerald. QUALITY EVALUATION THROUGH NOMOGRAPHS. Albany, New York New York State University, 1970, 34 p. (ED 047 006)

The Quality Measurement Project of New York State, in an attempt to simplify the assessment of school effectiveness, has applied nomographic techniques to this process. Essentially a nomograph is an easy graphic method of obtaining a predicted score without the use of the original regression equation upon which it is based. In the case herein described, the average reading score (grades 5 and 8), average arithmetic score (grade 5), and average composite score (grade 5) on the Iowa Tests of Basic Skills, Form 4 may be predicted from average IQ, average mother's education, and instructional costs. Likewise, average arithmetic score (grade 8) may be predicted from mother's education, father's education, and IQ and average composite score (grade 8) from father's education, IQ, and instructional costs. The computation of each of these variables for use on the included nomographic charts is described. The process of entering these figures on the charts and obtaining the predicted score (a matter of drawing two or three lines) is explained. Once the predicted score has been obtained, it may be compared with the actual average score and school effectiveness may be assessed by use of the standard error. This process is also described. For a description of the study and the statewide norm tables upon which the nomographs are based see TM 000 316.

Research & Information Center
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SELECTED BOOKS & PAMPHLETS

ON

ACCOUNTABILITY

72

Chamber of Commerce of the United States. BLUEPRINT FOR THE POSSIBLE: A CITIZEN ACTION PROGRAM FOR BETTER SCHOOLS. Washington, D. C.: The Chamber, 1972, 39 p.

The report begins by stating that accountability is the keystone of effective education. Without a commitment to accountability for results, they believe there will be no sustained improvement in American public education. Accountability requires the most cost-effective means of accomplishing education goals in specific and measurable terms: public disclosure of education outcomes; and corrective action in response to needs. The dominant and appealing features of accountability for results are as follows:

- The chief focus is on output--the results of the educative process.
- Cost-effectiveness institutes a crucial new dimension at every level in the process.
- Measurable objectives, based upon documented needs determine resource allocation.
- Evaluation of results becomes an integral and dynamic part of the educative process.
- New validity is given to cause/effect relationships.
- An independent accomplishment audit is required, with public disclosure mandatory.

The following specific accountability policies to achieve management objectives are given:

Policy #1--Teacher Accountability: The Board shall hold each teacher accountable for knowing and using the preferred practices in the field of teaching in general and their particular areas of specialization. The Superintendent shall present to the Board modes of proof for assessing a teacher's knowledge and use of preferred practices in the general and special fields of teaching.

Policy #2--Increased Educational Productivity: The Board shall hold itself accountable to the community for the development and maintenance of a continuing program to increase the educational productivity of the school system.

Policy #3--Comparability: The Board shall hold itself accountable to the community for the equitable distribution of district resources, funds and services to each school in behalf of each student.

Policy #4--Educational Program Audit: The Board shall employ an educational program auditor to secure an independent educational accomplishment audit of a designated portion of the educational programs under its purview. The audit shall include all experimental programs.

Chamber of Commerce of U. S. (Continued)

Policy #5--Equity of Results: The Board shall hold itself accountable to the community for the achievement of equity of results among the major sub-groups of the student populations. It shall be the purpose of the Board to close the performance gaps, if any, revealed by standardized measures of group performance among black, bilingual, poor and disadvantaged students, and the national average for all children.

Policy #6--Personal Competence: Recognizing that a primary purpose for the existence of schools is to prepare each individual for adulthood and full participation as a competent citizen in society, the Board holds each school accountable for substantial progress each year in producing students with competence in the fundamental skills of adulthood. Toward this end, the superintendent is directed to list each student's entry level skill by school on criterion referenced instruments in reading, writing, computation, study skills, and others as they are developed. He is further directed to list the gap between the entry level performance and the district standard and the progress each student has made that year against the standard.

Policy #7--Student Worth and Dignity: The Board holds each school accountable for the maintenance and improvement of programs in each classroom to enlarge human worth and dignity. Such programs shall draw on the knowledge of human relations programs.

Policy #8--Educational Check-Ups: Knowing the fallacy in the myth that what is not taught in school is of little value or that what is learned outside of school is not worth knowing, the Board holds itself accountable to the community for the recognition of desired learning outcomes regardless of source.

Policy #9--Cost Control: The superintendent shall be accountable for reporting costs by district, school and program level.

Policy #9a--Cost Control in Categorical Aid Programs: The superintendent shall establish and maintain an adequate fiscal review of all categorical aid, federal, and state programs.

All the above policies are elaborated on in more detail in the full report.

Chamber of Commerce of the United States. THE NEGLECTED IMPERATIVES IN EDUCATION - COST EFFECTIVENESS, PRODUCTIVITY, ACCOUNTABILITY. Washington, D.C.: The Chamber, 1971. 10 p.

In this concise brochure, the author states that in terms of resources allocated, the American school system is the most expensive in the world. But what about its productivity? Its effectiveness? What has the American public received for its money?, he asks.

The first report of the national assessment effort, for example, indicates that American pupils are achieving far less well than was previously thought. Education has attempted to defend itself against the barrage of criticism, but certain facts cannot be argued: (1) that an estimated 15 million students in this country are functionally illiterate, (2) that there is a 70 percent dropout rate in the poverty-stricken urban areas, (3) that one-third of the high school graduates taking a fifth-grade level Armed Forces Qualifying Exam fail it. It is hardly surprising, then, that a recent Gallup Poll (Fall 1970) showed that 80 percent of the population wants some form of accountability for the 20 cents of every tax dollar spent on education.

The report goes on to state that in education, the only standards that are used relate to input--to numbers of teachers, books, space, laboratories and the like. In terms of output--learning--they cannot describe how close our schools come to accomplishing what they aim to accomplish--or what any state or local community wants to accomplish. The public is developing effectiveness indicators on its own as it is confronted almost daily with evidence of student unrest, teacher militancy, drug abuse, and galloping costs. And the public is responding in ways which are forcing the much needed reform. Many school systems today are literally going bankrupt.

The first steps in a constructive program to increase educational productivity has to do with application of managerial know-how. Poor scheduling inefficient building utilization, unrealistic budgeting, poor logistical support of instruction, and inadequate long-range planning are a few of the specific effects that plague school systems unable to meet the need for greater competence in management.

The second step toward improvement is a delivery system. The report cites education's lack of seeking better ways of performing; for checking up on its progress. It does not use available research and development. The report further states that we should be able to show a visibly better performance in education each. In the same way that we are apply the notion of zero defects in our space vehicles, we must prevent failure in our most important product--out children.

The third step in the increase of educational productivity has to do with special school system policies and strategies for implementing those policies. Policies set the direction for a system. New policies are needed to: (1) stress student learning; (2) independently evaluate learning; and (3) report the results publicly.

Colorado Department of Education. REPORT ON THE EDUCATIONAL ACCOUNTABILITY ACT OF 1971. Denver, Colorado: The Department, 1972, 59 p.

This document is a report of the first six months of implementation of the Educational Accountability Act of 1971 (S. B. 33 enacted by the First Session of the 48th General Assembly of Colorado). Three main sections are included in the report as requested in the Act: (1) Development and Administration of the Educational Accountability Program; (2) Status Report on Educational Accountability; (3) Recommendation to the Legislature. An Appendix, Examples of District Response, is included to give the reader a fuller understanding of the process of accountability as it has been initiated in local school districts.

The State Department's Accountability Advisory Team assists local units in implementation of their programs. The State Accountability Report Form is shown and is divided into four sections: (1) Local Accountability Committee; (2) Local Educational Goals; (3) Performance and Process Objectives; (4) Evaluation.

The final chapter consists of examples of district response to accountability. The goals of the education program of one district are listed. The report states that District C's program of education is designed to provide every pupil the best possible opportunities and the strongest possible incentives to learn and to develop his abilities to his maximum potential in the following areas:

1. Gaining command of the fundamental knowledges, habits, and skills in the language arts, mathematics, the sciences, health, and social studies.

2. Gaining understanding of and living by desirable moral and spiritual values, such as honesty, truthfulness, and respect for authority.

3. Gaining ability to recognize problems, to think effectively about them, and to act constructively toward their solution.

4. Acquiring a broad range of interests with deepening concern for special fields; for example, reading and literature, the fine arts, and physical skills.

5. Developing wholesome attitudes toward self, family, and others.

6. Developing appreciations, understanding, and creative powers which increase awareness of and response to the aesthetic aspects of nature, art, and literature.

7. Developing a code of conduct in accord with such worthy purposes and ideals as citizenship in a democracy, appreciation of our American heritage, and understanding of other cultures.

8. Choosing and preparing for a career.

Forsberg, James R. ACCOUNTABILITY AND PERFORMANCE CONTRACTING. Eugene, Oregon: ERIC Clearinghouse on Educational Management, 1971. 10 p.

This analysis and bibliography has been prepared to analyze the major research ideas and trends reported in the literature on accountability. The analysis provides definitions of accountability and performance contracting, surveys their causes, identifies supporters and critics, cites current projects, and discusses the issue of governance, the use of management systems and safeguards, the problems of measurement, and the legal aspects of performance contracting. A bibliography is included which lists all the authors and research which the author of this report has analyzed.

Definitions of Accountability - Accountability is defined by Kruger (1970) as the responsibility to provide effective educational programs and to employ efficiently the resources allocated for this purpose. Rhodes (1970) considers accountability a goal-directed management process that permits both the present and the desired operation of a school to be viewed from a common frame of reference, with priority placed on the learner. Accountability provides the means for dealing with process and product together.

Definitions of Performance Contracting - Under performance contracting, a local educational agency contracts with private enterprise to achieve specific goals, within a specific period, for specific costs. (Author) Lessinger--"At its most basic, it means that an agent, public or private, entering into a contractual agreement to perform a service will be held answerable for performing according to agreed-upon terms, within an established time period and with a stipulated use of resources and performance standards."

Causes and Demands - The federal government has increasingly demanded accountability for money issued under its programs, such as Titles II and VIII of the Elementary and Secondary Education Act of 1965. For example, Title VIII's Dropout Prevention Program provided the impetus and funding for the Texarkana contract and a number of succeeding contracts. The Model Cities Program has also provided funding for contracts. Another cause of the federal government's insistence on accountability is the increasing emphasis on evaluation and assessment, as evidenced by the National Assessment Program.

Governance - Teacher associations as a group demand various degrees of governance or decision-making in policy matters before they will accept accountability. Another group focuses on the school level and would hold the principal accountable. Yet a third group is researching to develop models and methods for determining the effects of various inputs by parents, administrators, and teachers on specified educational outputs. In discussing this third group, the author calls attention to Barro's sophisticated analysis of the information and methodology required to determine the extent to which teachers or administrators can affect outcomes within their own spheres of responsibility, given the environments in which they must work and the constraints placed on them. He recommends statistical analysis of the effects on a pupil's progress in a given classroom of such variables as ethnicity, socioeconomic status, and prior

educational experience. Barro's methodology for measuring the individual agent's contributions to pupil performance is a multiple regression analysis of the relationship between pupil performance and an array of pupil, teacher, and school characteristics.

Measurement Problems - Accountability presupposes some measure of inputs and outputs. Because the evaluation of achievement is no better than the measurement instruments used, the identification of appropriate instruments to measure the attainment of specified objectives is essential.

Lennon (1971) questioned the validity of the standard achievement tests. He suggested as an alternative or supplement the criterion-referenced tests. However, it is not yet clear how results of a series of criterion-referenced tests can be translated into units that will yield measures of gain. Criterion-referenced tests have been recommended by others. Harmes (1971) maintained that use of behavioral objectives increases the options for development of many different specific procedures, instead of limiting the process to one test or combination of uncorrelated tests.

Byrd (1970) discussed current testing problems, including the time lag between events and curricular changes and new test construction, and the use of test results as a method of evaluation in accountability.

In conclusion, he points out the disapproval of accountability that may occur if the programs are not carefully planned and worked out with the affected groups.

Lessinger, Leon M. ACCOUNTABILITY (Croft Leadership Action Folio 36). New London, Connecticut: Croft Educational Services, Inc., 1971.

The folio states that essentially, accountability means that schools:

. Set goals of concrete, measurable improvements in pupil performance.

. Subject results to an objective audit or evaluation, and

. Report results to the public in clear terms.

The author calls for the schools to deemphasize norm tests that tell us where pupils stand in relation to averages, but very little about what individual children can and can't do. Instead, he advocates the use of diagnostic tools.

Accountability rests on the application of a variety of systems concepts to education. Basically, most of these approaches have the following steps in common:

1. Careful identification of the problem--leading to a precise statement of objectives.

2. A look at various possible solutions to the problem--spelling out the procedures and constraints involved in each.

3. Selection of the best solution based on costs, feasibility, and other considerations.

4. Implementing the solution--designing all the components and fixing responsibility for implementation and deadlines.

5. Evaluating the program.

6. Revising, improving enroute and at end.

There are two special requirements of systems concepts that can spell the difference between success and failure. These are: seed or development money; and a careful prior assessment of any innovation or spearhead project's potential impact on the whole school system. To become accountable, schools must find ways of raising or setting aside more funds for experimentation, with its risks of failure.

A statement of the detailed steps to be carried out in each of the main components of a system analysis--as developed by Dr. Roger Kaufman--is included.

Part B of this report discusses some of the specific elements of accountability, shows how they are interrelated and tells how to apply them in real, every-day situations in a school system. A model developed by Bloom, Hastings, and Madaus is shown which describes the relationship between evaluation, instructional decisions, and analysis.

Part C gives a report on the Performance Contract. Included are actual documents used by districts in setting up a performance contract.

Lessinger, Leon, and others. ACCOUNTABILITY: POLICIES & PROCEDURES. New London, Connecticut: Croft Educational Services, Inc., 1971.

The purpose of this four-volume set is to provide the school administrator and school board members with clear illustrations and explanations of the steps involved in framing accountability policies. Each of the volumes treats the policy making issues of one particular area:

Volume I: Learning (Series 1000)
Volume II: Students (Series 2000)
Volume III: Personnel (Series 3000)
Volume IV: Management (Series 4000)

Each volume has been coded according to general areas (series numbers) and their respective sub-areas. These numbers categorize the different aspects of a complete accountability program, and lend themselves to expansion.

Features of these reference manuals include a broad array of performance-oriented policy samples and supplementary exhibits. The policy samples, founded on current development throughout the nation, are designed to be used as models which may be adapted to the needs of a specific school system. Each policy sample is divided into the four parts which reflect the operational steps necessary for developing and implementing actual policy:

1) statement of the situation or need.
2) statement of objectives of the policy to answer that need.
3) policy statement.
4) feedback resulting from implementation of the policy.

The supplementary exhibits are drawn from actual activities of the nation's schools, detailing manners by which accountability policies have been developed and utilized.

Volume I: Learning

This initial manual focuses on precise objectives that will produce measureable development in knowledge, skills, and attitudes, and the results to be demonstrated. Some of the areas involved are: career, citizenship, character and survival education.

Volume II: Students

The second volume of this set outlines rights and responsibilities of student personnel. These policies, distinct from learning, include health and safety, student progress, success and competencies, student activities, and discipline.

Volume III: Personnel

Spotlighting desired performance of employees in meeting effectively the needs of learners, this phase includes standards of performance, compensation, staff development, rights and responsibilities, even fair dismissal.

Volume IV: Management

Policies in this fourth volume reports successful management of an effective accountable school system. These policies are related to such important facets as: planning, budgeting, operation, controlling, legislative and executive responsibility.

Lessinger, Leom N. EVERY KID A WINNER: ACCOUNTABILITY IN EDUCATION, New York: Simon and Schuster, 1970. 239 p.

This volume is a formulation of the thinking behind the development of what Lessinger calls "educational engineering." He outlines in some detail the steps schools can follow in taking the initiative in attacking their difficult educational problems. He explains how these procedures are likely not only to find more efficient solutions but also to meet the increasing public demand that the schools accept accountability for their heavy responsibilities.

He calls attention to the bell-shaped distribution curve that is often used to allocate grades from A to F to a "normal" group of students. "The symmetry of this curve leads us to believe that this system is fair and orderly, until we stop to realize that the children on the wrong side of the slope--the ones sliding down toward F--lack the ability to operate in modern society. How can we tolerate a system in which roughly a quarter of the children are expected to fail or barely make the grade? Is this the best our schools can do?" states the author. "The Education Act of 1965 assumes that we can do better. This Act asks the schools to guarantee the acquisition of necessary skills to each student, regardless of his abilities." In short, the book poses two questions: Can the school guarantee the acquisition of basic skills by all children? And does it use the most economical means to this end?

In discussing engineering for education, Lessinger says that when a program in the schools is well engineered, it will meet several tests:

1. It will require educational planners to specify, in measurable terms, what they are trying to accomplish.

2. It will provide for an independent audit of the results.

3. It will allow taxpayers and their representatives to judge the educational payoff of a given appropriation.

4. It will stimulate a continuing process of innovation, not merely a one-shot reform.

5. It will call forth educational ideas, talent, and technology from all sectors of our society, not only from within a particular school system.

6. It will allow schools to experiment with new programs at limited risk and adopt the best of them promptly.

7. Above all, it will guarantee results in terms of what students can actually do. In this sense, educational engineering is not a single program, but a technique for the management of change.

Maryland State Department of Education. ACCOUNTABILITY: EVALUATING COMPENSATORY EDUCATION. Baltimore, Maryland: The Department, 1970.

1970 marked the fifth year for ESEA Title I programs in Maryland. In observance of this milestone, the Maryland State Department of Education, Division of Compensatory, Urban and Supplementary Programs, held a conference to explore the related themes of accountability and the evaluation of compensatory education.

Dr. James A. Sensenbaugh, State Superintendent of Schools, observed at the conference that parents, legislators, the press, and the general public are expecting visible evidence of student achievement in return for the great sums of money currently being invested in public education. And, these groups are holding educators responsible for what students achieve--or do not achieve--in school. This is the essence of accountability and the challenge confronting all who are involved in programs of compensatory education.

The following topics were explored at the conference:

. Clear, simple, measurable objectives for accountability
. Baseline data and instruments for pre- and posttesting
. Educational significance and terminal evaluation
. Accountability and the future for compensatory education
. Steps toward accountability

To achieve the priority goal for Title I Projects: IMPROVE BASIC ACADEMIC ACHIEVEMENT, especially in the area of reading skills, the following steps toward accountability were suggested:

1. Assess students' needs, to determine where deficiencies exist. How?
2. Use diagnostic pretests, both informal and standardized, to obtain the baseline measures of students' academic skills and social, physical, emotional, and psychological characteristics. Consult and involve parents and members of the community.
3. State three or four clear, simple, measurable objectives for the project. Based on the assessed needs of the students, these objectives should specify in quantitative terms the outcomes desired at the conclusion of the project.
4. Design and implement appropriate SERVICES and ACTIVITIES to reach the stated objectives.
5. EVALUATE the project to determine how nearly the objectives have been met, how effective the project activities have proven to be, and how productive the investment of funds, time, and effort has been. How?
6. Use posttests, parallel to the pretests administered when assessing students' needs.
7. What HAS been accomplished through the project and what NEEDS to be done in subsequent projects to accomplish the priority goal will be indicated, providing a new assessment of needs to resume the cycle.

Nyquist, Ewald B. ACCOUNTABILITY IN ELEMENTARY AND SECONDARY EDUCATION. Albany, New York: Office of the Commissioner of Education, 1970. 10 p. (Speech made to the Education Commission of the States, July 9, 1970)

Accountability, states Nyquist, means to me a continuous willingness to evaluate education, to explain and interpret the results with all candor, to divulge the results to the publics or constituencies that need to know them, and to be personally and organizationally responsible for the weaknesses as well as the strengths revealed.

Evaluation has to do with some notion of finding out how well an educational enterprise is going or how successful an educational activity has been. It means, too, the comparing of the resources employed on an activity with the dollar benefits obtained or likely to be obtained from it. Thirdly, evaluation means cost effectiveness analyses designed to measure the extent to which resources allocated to a specific objective under each of several alternatives actually contribute to accomplishing that objective so that different ways of gaining the objective may be compared. Finally, evaluation implies precise program goals and educational objectives hopefully stated in behavioral terms and measurable operational terms, not in glittering generalities. Evaluation techniques can be both objective and subjective in education, for not everything in education can be scientifically and antiseptically determined.

Teachers in their new and increasing mood of aggressive militancy are going to make demands on their conditions of employment which will bear positively on increasing educational effectiveness and conversely to make contract terms pledging themselves responsible as well, believes the author.

Students, too, are asking for accountability. They are questioning the adequacy of the curriculums, their meaningfulness for them. They are sharply questioning the whole concept of tenure, especially for teachers who turn them off, and they are criticizing antiquated school policies, paternalistic methods of governance, and the inadequacies of sandbox student government.

There are two aspects to accountability in education. Have the funds been spent for the purposes intended and what effective use has been made of them.

There is an accelerating public demand for an accounting of our educational stewardship. Evaluation has become one of the major challenges to education in this decade. What it means is that school boards and local and state educators will face the responsibility of taking the public into full partnership--explaining the problems and limitations of testing and other means of evaluating education, welcoming assistance, and sharing the resulting information.

An annual report of school achievement, including test results, should be made to the community, states Nyquist. Such a report could include follow-up information on graduates, changes in pupil achievement, new types of testing that are being tried, characteristics of the student body being served, and comparisons with other appropriate school systems and standards.

Ohio Department of Education. EDUCATIONAL EVALUATION: OFFICIAL PROCEEDINGS OF A CONFERENCE. Columbus, Ohio: The Department, 1969. 121 p.

In the foreword of this book, Dr. Martin W. Essex states that the educational community today is under severe examination both from within and without. The causes appear to be related to an "oversell" of education as a magic solution to our social problems, the inability to measure achievement in relationship to dollars spent and frequent excessive claims for each new theory or experiment as the remedy to all learning difficulties. Within the context, the need and importance of accurate measuring, appraising and assessing instruments is vital, says Essex. "We appear to be making some progress. The federal evaluation project, which is being conducted in 17 states, and the national assessment may provide ancillary developments which will advance the knowledge and instrument development for meaningful measurement. In-depth consultation with the outstanding minds in this field which were assembled for this Conference on Educational Evaluation can be a most significant step toward continued advancement in the measurement of academic attainment, attitudinal development, and performance skills," he further states.

Contents of the book are as follows:

. Educational Evaluation in Perspective

. Evaluation Requirements and Expectation: What the State Education Agency Requires and Expects & What the Local School Board Should Require and Expect

. An Overview of the Discrepancy Evaluation Model and a Related Case Study

. Educational Objectives: An Integral Part of Evaluation

. Evaluation Design, Instrumentation, Data Collection and Analysis of Data

. Leadership and the Use and Misuse of Evaluation Evidence

. Profile of a School District's Department of Evaluation--Present and Future

. Current Problems in Educational Evaluation and Accountability.

PROCEEDINGS OF THE CONFERENCE ON EDUCATIONAL ACCOUNTABILITY, Chicago, Illinois, June, 1971. Princeton, New Jersey: Educational Testing Service, 1971.

So great is the interest--and so meager the clarification of the many issues and problems involved--that the need for a comprehensive look at the concept prompted Educational Testing Service to sponsor a series of conferences on accountability. Each of the speakers' papers provide a substantive and challenging contribution to better understanding of what is involved in developing and implementing accountability programs of integrity and merit.

In "The Means and Ends of Accountability," Erick L. Lindman describes the relationship between program budgeting (PPBS) and behavioral objectives.

Mark R. Shedd in his paper, "Issues in Implementation," takes a brief look backward at the educational scene since the passage of the Elementary and Secondary Education Act of 1965. He points out that in spite of the billions of extra dollars that have been spent on education since then, there is no major study that shows any significant improvement in pupil learning, reduced dropout rates or better teaching. He cites the necessity of measuring quality by output rather than input. Shedd then states that accountability will get nowhere if it is cast in the punitive sense of saying to a teacher, "Here, you SOB, raise all these kids' achievement levels a certain rate or you'll get fired." Accountability should be a positive thing. Successful teachers would be protected against unfair criticism by providing proof of their effectiveness, while the system would indicate the additional training needed by ineffective teachers.

James E. Allen, Jr., in his paper, "Public Expectations," feels that the push for accountability must come from the government and the profession. Government must assist in developing and making available the technique and instruments of accountability. Within the profession, Allen states, support comes primarily from those who are already productive, with support lacking where accountability is most needed. An acceptance of accountability requires a perspective that recognizes the indivisibility of education and concentrates on terms of the whole rather than its parts, he quotes Buckminster Fuller, who said, "We have so many specialized abilities we can blow ourselves to pieces, but we have no ability to coordinate ourselves. I see our society as very powerfully conditioned by its reflexes, with very, very tight ways of functioning. And that is dangerous--so dangerous that if man does not stop thinking locally and make the grade as a world man we may not be able to continue on this planet."

"The Role of Evaluation," by Henry S. Dyer, and "The Future of Accountability," by Edythe J. Gaines are the concluding papers.

Provus, Malcolm. DISCREPANCY EVALUATION. Berkeley, California: McCutchan Publishing Company, 1971, 380 p.

In the section, "A Time for Accountability," the author states that the history of recent public school programs is one of lack of documentation, lack of program control, and measured outcomes suggesting that there is greater variation within programs than between programs. A recent unpublished evaluation of team teaching revealed 131 different programs in 39 different schools, none of which adhered to the essential principles of team teaching contained in the school system's original understanding of the concept. The author asks, "Is it any wonder that students who had been exposed to this kind of 'team teaching' for 6 years showed no greater growth in academic performance than did a control group?"

Public school systems, says Provus, are traditionally monolithic, hierarchical, monopolistic, and, therefore, relatively insensitive to change. Further, if change is to occur, it must be due either to explosive external force or to skillful, internally directed, gradual pressure-- a delicately balanced movement that produces within the members of an organization first uncertainty, then awareness of a problem, analysis, self-appraisal, readiness for change, commitment to change, and ultimately the satisfaction of problem solution and self-realization.

He goes on to say that the timing associated with ESEA funding has had disastrous effects on program planning and design. The evaluation clause of the ESEA established evaluation as a necessary building block in the design of American educational reform. The evaluation implications of ESEA could eventually have greater impact than the program itself. Perhaps, states Provus, before we can build effective new programs, we must establish creative new ways to monitor new programs and eventually to judge their effectiveness.

He offers five definitions of program evaluation for consideration:

. The judgment of authorities about a program

. The opinions of program staff

. The opinions of those affected by a program

. A comparison of actual program outcomes with expected outcomes; and

. A comparison of an executed program with its design.

The fourth approach, i.e., evaluation of program outcomes, establishes performance criteria for program recipients. This approach is represented by all that is most current and "scientific" in educational evaluation. Starting with the work of Tyler and the perfection of standardized instruments with norms for various populations, and continuing with the present interest in group criterion reference tests, etc., the preoccupation of

the present generation of evaluators has been and continues to be a microanalysis of a learner's behavior at various times before and after exposure to a lesson, program, treatment, or institution.

The author's Discrepancy Evaluation Model, which includes both the case study method and experimental design, was designed to improve existing school programs, establish new and better programs, and contribute to greater accountability of educators to the public.

The application of the Model to public school programs such as Early Childhood Education Program for Pregnant Girls, School Lunch Program, and others, is discussed.

Research & Information Center
State Department of Public Instruction
Raleigh, North Carolina 27602

April 1972

SELECTED JOURNAL ARTICLES

ON

ACCOUNTABILITY

Boutwell, William D. "Happenings in Education," THE PTA MAGAZINE 66:23, January 1972.

The information in this article came from a new report destined to have wide influence. Its title is STATE EDUCATIONAL ASSESSMENT PROGRAMS, by Henry S. Dyer and Elsa Rosenthal and the publisher is Educational Testing Service. The authors visited every state to obtain firsthand information.

Out of the authors' visits and study of all the states came the following list of goals receiving top priority and subject to measurement:

. To help students become effective participants in society.
. To increase the ratio of guidance counselors to pupils.
. To ensure that students acquire sound health habits.
. To ensure that all students are capable of reading "at grade level."
. To reward teaching and administrative personnel in accordance with the degree to which they produce learning in students.
. To reduce class size by increasing the ratio of teachers to pupils.
. To provide more effective in-service training for school personnel.
. To ensure that every student shall have acquired a marketable skill by the time he or she graduates from high school.
. To stimulate community involvement in the work of the schools.
. To reduce the student dropout rate.
. To modernize and enlarge school facilities.
. To give students a sense of worth as human beings.
. To keep school budgets as low as possible consistent with sound education.
. To sensitize teachers to the individual learning needs of the children they teach.
. To bring the results of research to bear on the actual operation of the schools.
. To promote better understanding among ethnic, racial, and economic groups.

The report then describes efforts being made in individual states, for example:

In Florida there is pressure to expand the present state-wide reading achievement test to sample student progress in all basic skills, K-12.

Michigan includes in its state-wide testing program the measurement of attitude toward learning, attitude toward academic achievement, and attitude toward self.

Pennsylvania is undertaking to measure such "significant aspects of human life" as self-concept, understanding of others, responsible citizenship, health habits, creativity, the acquisition of salable skills, the understanding of human accomplishments, readiness for change, and students' attitudes toward school.

In California, the 400 school districts were invited to submit statements of philosophy and goals. Eighteen statements were identified. These have influenced state legislation, which now calls for the development of a common state curriculum, modified by local options.

Clair, Theodore N. & Kiraly, John Jr. "Accountability for the School Psychologist," PSYCHOLOGY IN THE SCHOOLS 8:318-21, October 1971.

Upon public demands that educational institutions account for the sum total of their activity, and as part of the educational staff, the school psychologist will have to prove his worth and succumb to closer scrutiny. His part in accountability should include his being a consultant and facilitator: he should help the superintendent and principal with evaluating the educational program, help the management to specify goals for the instructional program.

When he is dealing with an educational problem of the student, the psychologist can be accountable for three major functions:

1. diagnosis - observation, testing report to provide data for second function.
2. intervention - designing relevant instruction; inappropriate behavior is changed.
3. evaluation - an analysis of the performance. By research and feedback the psychologist can recast intervention strategy procedure in order to produce relevant change in the total process.

The psychologist should be accountable to his supervisor/administrator who should be able to evaluate objectively the performance of school psychologists on the basis of:

1. result-oriented data - objective evidence that measures functional performance of the psychologist, i.e., records, personal logs.
2. person-oriented data - administrator judges the psychologist on basis of initiative, technical and interpersonal competence--ratings by the psychologist's peers is also a method.

The authors also mentioned the use of psychological auditing by veteran school psychologists or diplomats in the field to examine and compare periodically of work of this staff member.

In conclusion, the authors state that the psychologist must become accountable for more than just diagnostic services, but must share the teacher's burden of aiding students in obtaining experiences relevant to their growth and development.

Daniel, K. Fred. "Moving Toward Educational Accountability: Florida's Program," EDUCATIONAL TECHNOLOGY 11:41-42, January 1971.

Accountability is viewed by the Florida Department of Education as "a process of explaining the utilization of resources in terms of their contributions to the attainment of desired results." A number of projects and programs have been conducted in Florida which have been designed to provide managers with needed techniques and information. These include the following:

- State-wide utilization of behavioral objectives. State-wide accreditation standards have been revised so that they include process and product items, as well as status items. Individual school personnel throughout the state are expected to prepare behavioral objectives based upon the general objectives included in the accreditation standards. Extensive training programs have been conducted for this purpose. Through the implementation of the accreditation program, skills of describing desired outcomes have been strengthened.

- Differentiated staffing pilot projects. Feasibility studies for flexible staff utilization are being conducted, with both state and federal support. These programs are centered in three pilot school districts.

- Programmed budgeting and cost effectiveness pilot projects. Two pilot projects in programmed budgeting have been conducted, one as an ESEA Title III project and one under Bureau of Finance in the Department of Education. A cost effectiveness project was sponsored by the Division of Vocational Education.

- Facilities utilization studies. Three pilot projects for extending the school year to make more effective use of facilities are being supported with state funds.

- Non-categorical allocation of funds for educational improvements. The Minimum Foundation Program for providing support to public education was modified to provide a portion of the funds on a non-categorical basis. These funds are distributed in a fixed amount for each instructional unit (i.e., teacher). In order to receive these funds, a school district must submit a plan detailing its needs. First priority is given to staff development.

Darland, D. D. "The Profession's Quest for Responsibility and Accountability," PHI DELTA KAPPAN 52:41-44, September 1970.

Darland limits his discussion to what needs to be done before the teaching profession can become accountable for guaranteeing competent performance and ethical behavior for its members. He goes on to clarify that "teaching profession" doesn't mean only classroom teachers, but includes professional personnel in state departments of education and other governmental agencies; those who teach or carry out other professional activities in pre-school programs, elementary, secondary schools and colleges and universities; and professional personnel in voluntary accrediting agencies involved with accreditation of educational institutions.

Darland believes that if this profession is to be accountable for its own, obviously it must have some form of self-governance. There is a great hesitance in giving the teaching profession the legal control over entrance to the profession: "It does appear illogical to ask a profession, especially classroom teachers within it, to be accountable when such persons are little involved with developing controls over entry into the profession." Different states have different procedures for certifying teachers, but in all the teacher has little authority; this current conglomerate state-by-state approaches to professional governance result in much confusion and frustration. Progress toward national approaches to the problem is very slow.

The NEA is mounting a national effort to bring about the necessary legislation in each state whereby the profession approves programs, issues licenses, enforces standards of ethics and practice, and promotes studies and research designed to improve teacher education, including the initial entry programs and continuing education. This organization is saying that if a profession is to be accountable, why not delegate the responsibilities which are correlative with being accountable? The legislature would not be giving up the right, but rather to place responsibility with those directly involved; moreover, there would always be the right of legislative review. The results of having such a professional board would include there being no question about the right of professionals to be held accountable, and the practitioners in the field would be in the position to participate in the establishment of policies related directly to their own continuing needs and problems.

In answer to these problems, a number of state departments of education are diligently searching for ways of involving the practitioner, but not providing the authority to be consistent with establishing practitioner accountability.

Darland mentions another aspect that seems to polarize the teacher from authority. He feels that the state departments of education deal with the educational establishment--managing institutions, and the teacher deals with professional establishment--teaching. These two establishments have not been incorporated and teachers are admonished that professional behavior does not have to depend on legal sanctions or rights.

The present demand for accountability may help mend these rifts & problems. More sophistication of teachers, which will pressure the teaching profession toward vigorous involvement and search for ways of being more responsible, is being demanded by more and more modern parents.

Darland, D. D. (Continued)

In summary, the teaching profession is moving toward creating the self-governance machinery and process required for their being accountable. This will happen despite the unwillingness to share legislative powers with the teacher.

Davies, Don. "The Relevancy of Accountability," THE JOURNAL OF TEACHER EDUCATION 21:127-133, Spring 1970.

In an address before Dean's Conference on Teacher Education sponsored by the University of Minnesota, Davies acknowledges there is accountability to taxpayers and to Congress, but he chooses to stress the responsibility that holds teachers, aides, administrators accountable for the educational achievements of their clients.

He feels that the primary goal implied by this concept is "to create a society that is free and open and compassionate, nonracist, multicultural, and productive." The changing of people, ourselves and all who have anything to do with running the schools is the basic need to achieve that goal.

Davies names some projects of the federal government to help in this change--such as compensatory programs as ESEA, National Defense Education Act. He showed favortism to the Career Opportunities Program (COP)--a Minneapolis program which uses people from low income communities as teacher aides or technicians.

Under the Education Professions Development Act, previous and new federal programs will be held accountable for their effectiveness; federal programs will be funded only if they can be evaluated on the basis of performance. Evaluation will no longer be the means by which educational personnel are trained, but the effectiveness of the learning that takes place as a result of that training. Teacher training institutions and local school systems will be accountable to the community for the quality of educational services delivered, and teachers will be accountable for what the children learn.

Duncan, Merlin G. "An Assessment of Accountability: The State of the Art," EDUCATIONAL TECHNOLOGY 11:27-30, January 1971.

The author states that the firm direction for the "accountability" movement seems to center around the very reasonable concern that we need to find ways to relate dollars to output (i.e., the cost of a unit of "education" of known quality and quantity in terms of dollars expended). The traditional method of assessing educational cost has been primarily based on the establishment of the relationship between dollars and educational input. This includes such cost factors as the number of students served per dollar spent, the number of teachers and their dollar cost, the dollar cost of buildings, or the number of courses provided and their dollar cost. Of course, most districts and other educational units can't even provide that cost information except in gross terms. In short, the present need is clearly seen to be a measure of the quality of educational output; and it is in this arena that the new trend toward "accountability" for the taxpayer's dollars must be met if the educational system is to continue as we know it.

Duncan also states that a system that will provide educational accountability should at least include the following:

1. It should measure program effectiveness based on stated real goal accomplishment in a time frame.

2. It should report results on a multi-dimensional format to the interested publics of the educational enterprise, both internal and external.

3. It should be a dynamic process that makes the educational system more responsive to the needs of society and its own clientele.

4. It should be related to comprehensive educational planning and show that the programs generated are economical in terms of opportunity costs.

5. The system by which accountability is satisfied should also be flexible enough to provide input to regenerate the system through constant evaluation and feedback which serves as a guide to program formulation, revision, or termination.

6. It should relate measurable educational goals to societal goals, and demonstrate the ability to interface educational systems with other public and private systems serving society.

We have consistently been budgeting by line item and object of expenditure patterned after the fashion in which we usually receive our appropriations. We have neglected systems that will allow us to do our internal record-keeping on a different basis and still yield the necessary reporting information. This practice tends to obscure the operation of programs, and puts all the importance on those things that keep us operating as we did "last year."

Duncan, Merlin G. (Cont'd)

The reporting by school districts to the public has generally been inadequate. The need to relate the output of the educational system to dollars and the persistent problems of society is of utmost importance. This means that educational administrators must develop a reporting system that is geared to the public relations program of the school system and that allows the administrator to answer the major questions that are being asked in terms of both dollars and quality.

The following list of prerequisites to educational accountability is needed (according to Duncan):

1. an adequate accounting system
2. an adequate personnel system
3. the introduction of comprehensive planning mechanisms at all levels of education
4. enlightened leadership from educational managers at all levels
5. an improved "delivery system," harmonizing federal, state and local goals in delivering quality education
6. the ability to research and evaluate ourselves and to eliminate the fear of being wrong
7. a mechanism to eliminate the built-in traditional programs and teachers and administrators that will not seek relevancy
8. to drastically change the training programs for educational administrators to include the following:

    a. financial management and accounting
    b. theory or organizations
    c. state, local and federal government
    d. school law (more than the usual one course)
    e. clinical internships for at least nine months, with residence credit where applicable
    f. disseration studies that are useful to educational agencies wherever possible (this does not precluse theoretical or basic research studies, but few Ph.D. candidates are equipped for "pure" theoretical tasks).

Fitzgerald, Peter. "Assessing the Perceived Educational Needs of Students," EDUCATION 92:13-14, February-March 1972.

The article states that if the process of education can be viewed as a system of logical steps leading to an ultimate change in learner behavior, then the first step is the assessment of student needs. Many educators are becoming aware of the necessity to build an educational program on a sound foundation, not only for the purpose of establishing better methodology, but also to eventually evaluate the effects of the program on the learner. Community support and bond defeats are beginning to seriously affect some of the programs that are currently in operation in our schools. The public relations aspects of the school operation must include the community, not just as a rubber stamp, but with an actual role in the school operation. Need assessment is one source of involvement.

The Tri-County Supplementary Educational Service Center developed a program with the University of California at Santa Barbara. The purpose was to devise a plan whereby districts within three counties could determine their perceived educational needs, establish priorities and thus do a more effective job in providing programs for learners. The technique is called the Discrepancy-Score Approach. Basically the technique gathers two sources of information. One is the information gained through the completion of a questionnaire taken by students, parents, and teachers related to discrepancies regarding the students' needs. After interpretation by a staff/community task force the information serves as a foundation for the establishment of learner-oriented programs. The second source of information is gained through a process called the reverse-flow interview. In this interview the teacher draws the perceptions of the parents toward the school and its effectiveness in meeting the needs of their son or daughter. Information is processed by computer.

There have been a number of program changes and better curricular decision making on the part of those who have utilized this approach.

Gaines, Edyth J. "Accountability: Getting Out of the Tangled Web," NATION'S SCHOOLS 88:55-58, October 1971.

Dr. Gaines, a community superintendent in Bronx, N. Y., believes that educators who don't want accountability are in danger of missing a grand opportunity to save their profession, raise it to new levels of respectability and status, and bridge the gap between them and their various publics.

When parents ask why their children are not getting the kind of results from schooling they had hoped for, educators have usually responded with one or more of the dodges that follow.

Dodge I: "There is something wrong with your child."

Dodge II: "There is something wrong with the environment."

Dodge III: "Schools can't be held accountable for everything."

Dodge IV: "Standardized test scores cannot gauge the effectiveness of individual teachers of schools."

Dodge V: "The most important outcomes of education are human and humane and will not yield to an accountability scheme. So let's not have one."

Dodge VI: "Certain children shouldn't be given standardized tests."

Dodge VII: "Not only do we not have adequate measuring tools for accountability, we can't agree upon what is to be measured."

Dodge VIII: "Yes, you're right. We educators really don't know much about why certain pupils are failing in school or what to do about it. We are doing the best we can. We just don't know any better."

Dodge IX: "Parents and public can't be trusted with data on school performance. They would use it as a weapon, engaging in vigilante activities."

Harrison, Charles H. "How to Respond to Public Demands for Accountability," NATION'S SCHOOLS 86:32-33, Nov. 70.

This article offers practical suggestions for one of the most important aspects of an accountability program--reporting to the public. This would be done by taking advantage of an existing avenue of public information--the school district's newsletter. The newsletter could feature a section called "Evaluation,""Accountability,""Balance Sheet," or something else appropriate.

The September or October newsletter should describe the objectives of the program, why it was instituted, what pupils will do differently, and how the program will be evaluated.

School officials should study comparative data in November, February and May. This should mean that there will be reports on the evaluations in the newsletters of December, March and June.

The newsletters should make clear how the objectives of the program are being served. For instance, are the students in the program rewriting their compositions and making corrections? Do they and their teachers find that these procedures improve the clarity of meaning, the expression of an idea or feeling, and incidentally, vocabulary, grammar, etc?

All reports of evaluation in the newsletter should always be completely honest and straightforward. The reports should never use jargon or statistics that are not readily understandable to the majority of residents of the district. And the district should not be afraid to discuss why something fails as well as why it succeeds.

Harrow, Anita J. "The Accountable Curriculum: Is a Performance Contract Necessary?" JOURNAL OF RESEARCH AND DEVELOPMENT IN EDUCATION 5:62-69, Fall 1971.

Anita Harrow bridges practice and theory in describing one school system's attempt to be accountable to itself, while leaving procedures and interpretations general enough to be of use in many school environments. Harrow speaks of both an accountable curriculum and its cost which makes her paper a clear and concise guideline for action.

Lieberman (1970) discussed two approaches to accountability. The first approach involves the analysis of the relationship between invested resources and achieved results. The second approach to accountability deals with consumer choice such as is found in the voucher system. Most educational systems are primarily concerning themselves with variations of the first approach.

A principal in an accountable school system is the curriculum leader and he should be concerned about his own abilities to make a desirable educational impact upon the teachers and children in his school. The teacher, therefore, becomes accountable to the principal concerning the curriculum provided in the classroom. Though many factors affect learning in the classroom, the teacher, nevertheless, should establish in the beginning the specific educational goals of the programs for which he has assumed responsibility. A teacher should use accountability as a lever for change. It should be an indicator of the effectiveness of the strategies and materials selected for use with different groups of children. By designing a program in behavioral terms a teacher is in a better position to report pupil progress to the principal relative to the stated goals and to analyze the problem areas in the curriculum. This kind of planning also provides a data base for the selection of teaching techniques and materials for the following year.

The accountable curriculum establishes the specific educational intents of the program and the evaluation techniques for measuring the desired behavior changes that occur. The first step in planning an accountable curriculum is developing a philosophy statement for each area of concern. A philosophy statement is a common sense personal or group view point concerning the planned curriculum and responsibilities which the curriculum entails. Once the philosophy is stated, a rationale is usually developed. The rationale substantiates the necessity and relevancy of the educational components which make up the statement of philosophy. Next a thorough assessment of educational needs should be undertaken. Educational needs assessment is a phrase used to describe a process designed to identify both major and minor areas of educational deficiency. From the identified needs will emerge the basic educational goals and the behaviorally stated curriculum. Needs should be ranked in order of priority and can become the basis for the development and implementation of appropriate strategies selected to help minimize the gap between the existing condition and the desired condition. The statement of educational intents in behavioral terms is a first step toward accountability in a particular content area.

Harrow, Anita J. (Cont'd)

The problem of how to effectively measure with both formal (standardized) and informal (criterion-referenced) instruments becomes the next step. Standardized instruments are used because that is the expected, and they facilitate the comparison of one group to another. The criterion-referenced instrument, however, is probably the most useful indicator of individual pupil achievement and serves as a guide for restructuring units and changing teaching strategies to obtain the most efficient utilization of teaching development. Criterion-referenced measures are essential steps toward achieving the accountable curriculum.

It is stated that classroom teachers should be able to do the same, if not better, job than performance contractors. The actual cost per pupil would surely be much less if teachers were given the opportunity to structure a curriculum in the basic skills or reading and math, were given some additional assistance, and perhaps were allocated some additional funds. In most instances, it probably would be economically more feasible to structure an accountable curriculum like the one illustrated than to pay several hundred dollars to a contractor for specific achievement gains made by each child.

The issues such as performance contracting, economic incentives, and voucher plans surrounding the renewed interest in educational accountability are bound to stimulate educators to state more explicitly their educational goals, to study more intensely the effectiveness of various teaching strategies, and to establish more specifically success criteria for determining degree of achievement attained.

Hencley, Stephen P. "Impediments to Accountability," ADMINISTRATOR's NOTEBOOK 20:1-4, December 1971.

In view of intense concern with making schools accountable, the time is ripe for discussion of impediments to accountability in this report. Three general types of deterrents are examined.

The first impediment is a conflict of philosophies. The push to make schools humane runs counter to the philosophy of accountability, some believe. On the one hand there is resolute support among Silberman's followers for making schools less grim, less multilative of spontaneity, less destructive of creativity, and less ruinous to the development of a healthy self-concept. On the other hand, there is an equal insistence among Lessinger's followers for movement toward accountability--with stress upon clear objectives, validated procedures, and a complete public reporting of outcomes. Campbell's analysis of this humanist-behaviorist conflict is offered:

"The accountability movement stresses precise objectives, planned allocation of resources, specified procedures, and measurement of outcomes. The humane or informal school, on the other hand, places great stress on spontaneity, flexibility, individual differences, and creative experiences not only in the academic subjects but also in the arts. There is little concern with measurement and great concern with feeling, joy, and openness. One movement is highly rational and precise. The other is largely impressionistic and flexible. In a sense, it is the difference between a science and an art."

A second dimension of the resistance to accountability is of a political-legal nature. In this section, the author examines the voucher system (in which a parent would be given a certain amoung of money for his child's schooling and then be allowed to choose the school his child would attend). He questions the legality of performance contracting.

Another deterrent to accountability among professionals is that accountability practices appear to present major roadblocks to the continued development of freedom and autonomy for teachers. Both the NEA and AFT support the position that it is absurd to ask a profession which has no authority to govern its own standards to account for presumed failings in its performance. The NEA has made clear the conditions it sees as being necessary to move toward accountability:

"... teachers must have the major voice in deciding those matters that relate directly to teaching... they must be largely responsible for determining who shall be candidates for the profession and by what standards teachers shall be prepared (including accreditation of institutions), evaluated, retained, dismissed, certified, and given tenure; how teachers shall be educated in service; how the curriculum shall be developed; and how media and materials shall be selected. Only when teachers' expertise is applied to these determinations can teachers be

Hencley article (cont'd)

held more accountable."[1]

Four impediments are evident in the technological and economic arenas: (1) the need for precise definition of learning outcomes for students, (2) The need to develop and install teaching-learning technologies capable of producing defined outcomes, (3) the need to design measurement devices that can give valid evidence of adequate system performance, including teacher performance, (4) the need to provide resources for the research, development, diffusion, and installation costs of such educational improvements.

He then states that until precise definitions of outcomes become available, the measurement of educational output will remain largely fortuitous, and implementations of accountability will tend to founder.

Of interest is his comment that we do not know what educational processes best translate educational inputs into desired educational outputs. One of the reasons for this, he believes, is that the research roles of various educational agencies at local, state, regional and national levels have tended to remain unclear.[2]

He then discusses the faults of standardized tests used to assess student performance, and states that the development of valid, reliable instruments for measuring output will constitute a formidable challenge in any significant move toward accountability.

[1]NCTEPS of NEA, "The Meaning of Accountability: A Working Paper," Nov. 1970, p. 3 (Mimeographed).

[2]"Planning and Effecting Needed Changes in Education," by Edgar L. Morphet and Charles O. Ryan, 1967. (Citation Press)

Howsam, Robert B. and NEA Association of Classroom Teachers. "Performance-Based Instruction, "TODAY'S EDUCATION 61:33-40, April 1972.

Performance or competency-based instruction seems closely related to accountability. Performance-based instruction implies that the teacher or learner is most likely to do what is expected of him and what he expects of himself if he is accountable for doing what he undertakes. PBI has four essential elements. These elements are:

(a) precise objectives, stated in behavioral terms; (b) performance criteria, indicators of performance, modes of assessment, and criterion levels specified and made public along with objectives; (c) instruction pertinent to the criteria; and (d) learner accountability in terms of the criteria.

Performance-based teacher education is the application of the principles and practices of performance-based instruction to teacher preparation.

Up to now, teacher certification has been based on imprecisely defined criteria. Completion of a specified number of knowledge courses and the student teaching experience have been the basis for certification. Professional examinations have long been in disfavor. The development of the performance movement has opened new avenues of approach to teacher education. If objectives can be defined and if performance criteria can be established, certification can be based either on completion of a performance-based program or on meeting the criteria levels through an examination procedure. A number of states are already committed to performance-based certification. The impact of such a step will force institutions to revise their traditional programs to incorporate the elements and enablers of performance-based instruction.

Johnson, Rita B.* "Objectives-Based Accountability Procedures for Classroom Use," EDUCATIONAL TECHNOLOGY 11:49-50, June 1971.

The author states that teachers at many levels are demonstrating a willingness to hold themselves accountable for their instructional effectiveness. They make the assumption that teachers cause learning, and that if the learner fails, it is the teaching that has failed. She further states that nowhere is this more apparent than in those schools where faculty members are now finding ways to: (1) specify their instructional objectives in measurable terms, (2) devise a variety of tests to determine if objectives have been met, (3) design replicable instructional materials to achieve specified outcomes, (4) gather evidence of the extent to which objectives are being accomplished and (5) revise instructional strategies until their objectives are achieved.

Following are some examples of ways in which instructors now use objectives to improve their effectiveness: (Each of these examples are elaborated on in the article.) (A) Teachers can do a variety of things to improve the specifications of objectives.
(B) Teachers can improve instruction through the selection of criterion measures.
(C) Teachers can employ a number of procedures to improve the organization and sequence of instruction.
(D) Teachers can use procedures to improve the selection of methods and materials.
(E) Teachers can do a number of things to improve the revision and refinement of instruction.
(F) Teachers can improve instruction by changing certain institutional practices.

In conclusion, she states that a courageous teacher can contract with supervisors to produce, test and revise materials in light of intended outcomes. In fact, he can agree to be hired, rehired or granted merit pay on the basis of whether or not learners have responded both attitudinally and intellectually in pre-specified ways. Thus the student works with instructors who have agreed on a contractual basis to produce learning and to be paid only if their students learn.

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Kaufman, Roger A. "Accountability, a System Approach and the Quantitative Improvement of Education--An Attempted Integration," EDUCATIONAL TECHNOLOGY 11:21-26, January 1971.

This article was intended to set a rationale for cooperation and interdependence between professional educational practitioners who are working to measurably improve the products and processes of education and define and achieve a functional accountability. A possible generic model for educational management is presented, identifying six steps for problem solving. Additionally, tools currently being used for the quantifiable improvement of education were briefly presented and discussed.

Kaufman's definition of accountability follows: "The primary function of education is to bring about relevant learning, and the primary task of educators is learning management." The learning management job could be CONCEIVED AS BEING THE PLANNING, ORGANIZING, DESIGNING, IMPLEMENTING AND EVALUATING of learning situations and outcomes and making required continuing revisions to assure ongoing relevancy and practicality. It is an accountability process.

Process is defined as the steps or manner in which an outcome is achieved. A product is an outcome. He suggests six steps in a problem solving model:
1. Identify problem (based upon documented needs)
2. Determine solution requirements and solution alternatives
3. Select strategies and tools (from among the alternatives)
4. Implement
5. Determine Performance Effectiveness
6. Revise as required.

Several tools which should provide rational and realistic ways of improving the educational product are:
1. Needs Assessment
2. System Analysis
3. Behavioral Objectives
4. Planning, Programming, Budgeting System
5. Methods-Means Selection Process
6. Systems Analysis
7. Network-based Management Tools
8. Testing and National Assessment
9. Educational Auditing

System Analysis is a process for determining the requirements for getting from "what is" to "what should be." It consists of analysis, in levels or layers, of requirements for problem solution. The outcome of a system analysis is a delineation of feasible "whats" for problems solution, and a listing of possible strategies and tools for achieving each "what."

Behavioral Objectives usually include a statement of (1) what is to be done, (b) by whom is it to be done, (c) under what conditions is it to be done, (d) what criteria will be used to determine its accomplishment.

Kaufman, Roger A. (Cont'd)

Planning, Programming, Budgeting System (PPBS) identifies the relationships between product outcomes and costs for various alternative methods and means.

Methods-Mean Selection Processes are procedures for deciding among alternative methods and means (strategies and tools) for achieving required outcomes. Cost-effectiveness is a key criterion.

Systems Analysis. Frequently, techniques for selecting among alternative solutions those which will provide the greatest cost-benefit are called "systems" analysis. Perhaps the plural form of the word "system" indicates the close linkage with the word used in conjunction with computers and hardware solutions.

Network-Based Management Tools. Cook and others have introduced the concepts of PERT (Program Evaluation Review Technique) and CPM (Critical Path Method) to educators in order for them to better manage and control the educational implementation process (Cook, 1966, 1967). It is suggested that these tools are best applied when all requirements are delineated, the methods and procedures are selected, and the job is to maintain control over the "doing" process.

Testing and National Assessment. Testing provides an understood manner for determining the effectiveness of any treatment. There appear to be some developments in testing which seem to offer promise for educators interested in planned change. One of these developments which relate to measurable performance objectives is criterion-referenced measurement which provides an alternative to norm-referenced tests.

Educational Auditing is oriented toward the statement of accomplishments and does not intend to provide suggestions for revision--it is status and accomplishment oriented only.

Kruger, W. Stanley. "Accountability and the Educational Program Auditor," PLANNING AND CHANGING 1:110-114, October 1970.

The emphasis of accountability is on performance. The educational administrator is expected to place emphasis on planning for results as well as on evaluation of results. A technique for promoting educational accountability is that of educational program auditing, utilized on a pilot basis in 86 projects funded under Titles VII (Bilingual Education) and VIII (Dropout Prevention) of the ESEA. If properly implemented, program auditing could be one of the most significant contributions to educational administration in recent years.

The central figure in the application of this new technique is the Educational Program Auditor (EPA). The EPA's model is the fiscal auditor now employed by almost all public school systems under state regulations or laws. The fiscal auditor is concerned with a specific, well-defined area of program managements with well established procedures in practice. Conversely, the EPA is dealing where procedures are not well established since this program is still in the developmental stages. The fiscal auditor functions through the accounting system while the EPA functions through the evaluation system, verifying the results of that system & assessing the appropriateness of evaluation procedures. They each do not operate their respective systems, yet both use their expertise, objectivity, and perspective to improve the quality of these, and indirectly influence the quality of overall program design & management without lessening the responsibility or authority of program management personnel.

The expertise of the EPA is added at critical points to that of regular program staff in establishing a continuous evaluation process capable of quickly providing "feed-back" necessary for adjustment of program operations.

The objectivity of the EPA as an external reviewer, lends an element of credibility to program performance reports. Energies are directed toward actions which will improve program performance.

The perspective of the EPA will be different from those of the regular program staff, and his different relationship to the program power-authority structure permits alternatives which might otherwise be closed. Elements often unfamiliar to educators can be more effectively brought to bear on problems of educational program management.

Qualifications of the EPA are many and varied. The primary qualification is the amount of training and experience in educational program evaluation and management analysis needed to monitor the comprehensive evaluation system. The EPA should also possess an acceptable record in the design of comprehensive evaluation plans; the development and validation of tests and other measuring instruments; the use of measurement and evaluation techniques in various aspects of educational program operations and management; and the effective processing, analysis and reporting of data and conclusions. To accomplish the total task, educational-evaluation organizations may need to add compensation.

Kruger, W. Stanley (Cont'd)

Factors to be kept in mind in employing an EPA include:

1. the EPA should be independent of any other involvement in program operations.
2. the EPA should be able to design, implement and complete a performance-based audit plan adequate to long-range program requirements.
3. the EPA should be located in reasonable proximity of the program site, keeping travel and other audit-related expenses to a minimum.
4. the budget for EPA activities should be in reasonable proportion to that established for evaluation activities. A guide used in the Title VII and VIII projects limits EPA costs to between 10 percent to 20 percent of total evaluation costs.

The procedures, related time and resource assignemts vary in complexity of the assignment. In general, these procedures may be classified in categories approximating the chronological sequence of auditing events:

1. Preliminary Arrangements - Establishment of liaison between prospective EPA and local educational agency; tentative selection of EPA based on criteria.
2. Pre-Audit Activities - EPA review of basic program documents; proposed design; approval of audit contract.
3. Audit Activities (Off-Site) - Scheduling and determination of on-site sampling, activities.
4. Audit Activities (On-Site) - Observing, interviewing, examination of evaluation instruments; determine of procedures for handling major discrepancy findings.
5. Report - Preparation and presentation of audit report; submitted to local educational agency officials.

"In the initial stages of his work, the EPA will focus primarily on determination of the adequacy of program evaluation design. Gradually this emphasis will shift to verification of the findings of the evaluation process. Throughout the auditing process, the EPA searches for discrepancies: discrepancies between proposed evaluation designs and program-requirement criteria; discrepancies between intended evaluation-process performance circumstances and accomplishments and real program circumstances and accomplishments. The goal, of course, is for the EPA to be able to report 'no discrepancies'!"

Currently, educational program auditing is being developed and practiced in few educational programs at the project level. Variations on the theme have been implemented: an "audit committee" has been proposed consisting of community, parent, and faculty representatives to assure that technical audit personnel give adequate attention to areas of particular inters to the participating groups. Other variations may be required in accommodating the American school system, perhaps to enable the adoption of program auditing as a standard feature of American public school administration.

Kruger, W. Stanley. "Program Auditor: New Breed on the Education Scene," AMERICAN EDUCATION 6:36, March 1970.

An interesting spinoff of the accountability movement is the rise of a new professional career in education. The job is designed to carry out the accountability concept. USOE reports that 86 program auditors have completed special training and are now assigned to 86 dropout and bilingual education projects conducted under Titles VII and VIII, ESEA. The function of the program auditor includes examination of a project's evaluation and management; passing judgment on the validity of the evaluation and on the success of management to meet its goals; and recommending possible changes. If the accty. idea works, the program auditor should become as vital to schools as the fiscal auditor.

Like the fiscal auditor, the program auditor needs to be independent of any involvement in the school's program except for his monthly or quarterly visits. If he became more deeply involved in the school's regular evaluation system, his objectivity would be compromised; he might dilute the authority of regular program management personnel.

When a program auditor visits a program, he begins by determining whether the program is using an adequate evaluation design. Once this is ascertained, his emphasis shifts to verification of the findings of the evaluation activities through observation, interviews, examination of completed evaluation instruments, review of material products, and other procedures that may be appropriate.

Throughout the auditing process the auditor searches for discrepancies between proposed evaluation design and the evaluation the program actually should have, between the way the evaluation process is intended to work and its performance, between reported program accomplishments and real results. Yet his work is not simply to assess results. He provides feedback which helps the program director adjust his operations to meet the demands of complex and changing situations--and thus, get the results. Presumably educational program auditing, as it spreads throughout education, would help school administrators verify the quality of their programs in much the same way.

Lennon, Roger T. "To Perform and to Account," (Address to the American Educational Research Association, Feb. 5, 1971, Americana Hotel, New York City) JOURNAL OF RESEARCH AND DEVELOPMENT IN EDUCATION 5:3-14, Fall 1971.

Roger Lennon points out the problems and pitfalls of measurement practices in performance contracting, while offering fresh insight into accountability concepts and practices. Lennon speaks from familiar examples as he chides contractors for guaranteeing that every child will wind up "above average."

Of special interest is his statement: "We know that education, unlike a manufacturing operation, must concern itself with raw material that is infinitely varied, and that it seeks a product, not of unvarying sameness as does the manufacturing operation, but with its initial richness and variety enhanced and multiplied. Who of us wants it to be otherwise? How to translate that richness and variety into behavioral objectives, how to assess their attainment in all their fullness, and how to capture it all in cost-effectiveness equations, I do not know. But I believe, pragmatically, that even modest and limited successes are better than a resignation to familiar failures."

He points out the difficulty of providing any neat definition of the term, accountability. Yet certain common elements are discernible:

1. What are the schools to be accountable for? For student accomplishment and development--cognitive, affective, motor...
2. Who is accountable? Our senses of logic and justice tell us that each person whose task it is to influence learning--teacher, supervisor, principal, curriculum coordinator, counselor, whoever--should be held accountable for precisely that part of the educational outcomes which he can affect directly through his own efforts...
3. How is accountability to be established? Clearly there is need for an accountability information system providing systematic information on output and input. Further, there is need for a method for relating the elements of input including staff efforts, instructional materials, support systems, etc., to the outcomes in a manner that will permit the attribution of the outcomes in proper measure to these various input elements.
4. By whom shall accountability be determined? There is substantial feeling that whatever a school or system may attempt in its own self-evaluative endeavors, independent auditors or accounting agencies are desirable.

Lessinger, Leon M. "Accountability and Curriculum Reform," EDUCATIONAL TECHNOLOGY 10:56-57, May 1970.

The call to accountability in education is a summons to review and reform the educational system. The concept rests on two foundations: demonstrated student learning and independent review. If schools are to be accountable for results, a new approach to their basic mission becomes mandatory and a new educational tradition will begin to emerge. In the first place, emphasis will shift from teaching to learning. A growing research literature shows teaching can be independent or influential, and that learning can take place without teaching. So independent is this relationship that some have termed it a teaching/learning paradox. Instead of equating quality in terms of resources allocated, such as kinds and numbers of teachers, space available, materials for use and books in the library, the independent variable will become student accomplishment Accountability triggers a revised commitment--that every child shall learn. Such a revision implies the willingness to change a system which does not work and find one which does; to seek causes of failure in the system, its personnel, its organization, its technology or its knowledge base, instead of focusing solely on students. This revised commitment can be properly called the principle of equity of results.

The second major effect of accountability on school curriculum reform centers on a technology of instruction and the notion of better standard practice. Without accountability for results, educational practice is unverified, and good educational practice is not identified. Technology is more than equipment, although equipment may be a part of technology. Technology refers to validated practice--the use of tested means to produce desired ends.

Several fields have been developed to enable leaders of very complex enterprises to operate effectively and efficiently. These emerging fields include: systems design and analysis, management by objectives, contract engineering (including warrantees, performance contracts, incentives), logistics, quality assurance, value engineering and the like. The coordination of these fields around educational concerns for an improved technology of instruction may be conveniently called educational engineering. Engineering has traditionally been a problem-solving activity. Virtually everyone agrees that something has gone wrong and that something dramatic ought to be done about it. Engineering accountability into public education can be that dramatic "something."

The eye of accountability lies in the phrase "modes of proof." Recognition of an expanded notion of assessment of results is the third major effect of accountability on school reform. For too long we have confused measurement of results in education with standardized achievement testing of the paper and pencil, normal curve based variety. Limited to this useful but restricted means of assessment, the pursuit of accountability would be potentially destructive. But accountability can make use of evidence from a variety of modes of attaining evidence. To argue that scientific measurement is limited to narrow so-called objective tests is to display both ignorance of the rich field of assessment, limited experience with

Lessinger, Leon M. (Cont'd)

science, and an inability to foresee the rapid development of creative output instruments and strategies which money and attention can promote.

Outside review tied to public reporting probably explains the popularity of the emerging concept of accountability to the public at large. Accountability can lead to an opening up of the system to bring in new energy and support.

Lessinger, Leon M. "A Historical Note on Accountability in Education," JOURNAL OF RESEARCH AND DEVELOPMENT IN EDUCATION 5:15-18, Fall 1971.

In this article, Dr. Lessinger, who coined the term "accountability," provides a brief historical note.

He discusses the dropout prevention program and the bilingual education program which were funded by Congress in 1969. Of particular interest are the sections on Educational Management Concepts and Educational Audits. He states, "Basically, accountability means that the grantee will be held responsible at any time during the project for accomplishing the objectives of the project which the grantee himself proposed within the time periods specified, within the budget limitations, and according to the standards established. Thus, at any point in the life of the project there will be a benchmark against which to measure performance."

Defining the educational audit, he notes that it is based on a notion of the fiscal audit, which is done in every school district. The people who do the educational audit could be a group of teachers. A mathematics group might look at the objectives in math. It could be an outside nonprofit firm or a university-based group who might come in to review what the local people intended to accomplish. He gives the following concrete example: One of the major objectives in our Title I program, and our dropout program has been the improvement of reading skill. Let us say that a local education agency has reading as one of its top priorities in its proposal. The people who will do the auditing would work with the staff, teachers, administration, and the school board to help them to determine what kind of evidence they would accept to demonstrate that the youngster can read.

Lessinger, Leon M. "How Educational Audits Measure Performance," NATION'S SCHOOLS 85:33-34, June 1970.

Accountability concerns measurement of educational output--but not just any measurement. Carefully designed systems for gathering output data are needed if subsequent evaluations are to have any validity. Educational program audits are one approach to measuring outputs.

The Independent Accomplishment Audit is a process similar to that used in a fiscal audit. The emphasis, however, is on learning--on student performance as a result of financial outlays. The IAA is designed as a "management feedback loop," a reliable and objective report to local personnel, commending accomplishments realized and recommending procedures for getting results missed. IAA relies upon outside judgment of results or accomplishments, primarily in terms of student accomplishment. It has six essential parts: the pre-audit; the translation of local goals into demonstrable data; the adoption/creation of instrumentation and methodology; the establishment of a review calendar; the assessment process; and the public report.

The Pre-Audit - The auditor selected by the school system starts the IAA process by discussing with the staff (students and community can be involved at this stage) the objectives and plans of the particular program to be reviewed. This phase produces a list of local objectives and a clear description of the programs in some order of priority.

The Translation - The auditor determines a clear formulation of the evidence that will be used by the local people to indicate that the objectives have been met and the conditions that will be used to elicit the evidence.

Instrumentation - Along with the translation, the auditor determines the instruments, such as tests, questionnaires, standardized interviews, etc., which will be developed or secured to gather the evidence agreed upon in the translation phase.

Review Calendar - An agreement is secured in writing which indicates the nature of reviews. It is essential that the calendar be determined in advance and that all concerned be a party to the agreement and competent to honor the agreement.

The Audit Process - In this phase, the auditor carries out the procedures agreed upon in the pre-audit, translation and instrumentation phases as codified in the review calendar.

The Public Report - The auditor files a report at an open meeting giving commendations and recommendations as they relate to the local objectives. The report is designed to indicate in specific terms both accomplishments and ways the program may be made more effective and efficient.

Lessinger, Leon M. "The Principal and Accountability," THE EDUCATION DIGEST 37:8-10, February 1972.

Dr. Lessinger resoundingly ends this article on the note that "Accountability, if professionally led, can very well be the movement to re-establish education's workability and credibility with its patrons." His foregoing information in this article is his defense for that statement. It provides the reader with a definition of accountability, reasons for its popularity, how it can be achieved, its outgrowths, and how a principal may "professionally lead" his school to this goal.

The author asserts that "Accountability is an independent, unbiased review, feedback, and report of effectiveness; and effectiveness is the central concern of school leadership." Two pertinent factors stated for the intense stress on accountability are "the erosion of professional authority, and the mounting cost of public education."

Dr. Lessinger provides five responses to the demand involved in obtaining accountability:

1. Clear-signaling - valid guidelines for teachers and administrators based on performance objectives and programs for training.
2. Change in mind-set - a pivot in point of view: from the fixed belief that "children can fail and be failures" to the commitment that "every child can, and shall, learn." Consequently, such an ambitious attitude entails willingness to substitute ineffective procedures for those that do work.
3. Acquisition by principals of skills and insights of educational engineering--"educational engineering" is an aspect of the principal's job. That is, he should attempt to assemble effective practices and implement them in the school.
4. Feedback - a "blind" system results from lack of knowing results. To avoid such, the principal has a major role in developing feedback systems within the school and for the school as a whole.
5. Management know-how - this final response to accountability challenges principals to obtain modern management training available via colleges, universities and the private sector.

Once acquired, accountability contrasts actual performance with that which was clearly intended by:

1. providing an independent review of performance against established objectives. This would destroy what the game theorists call the "zero-sum" game in which any change for the participant adds up to zero.
2. fostering future thinking in terms of the possibilities the future holds for the student, not on his relationship to anyone else.
3. fostering an open system achieved when principals translate demands of objectives into programs to meet them, leading the school to creative and enriched procedures.
4. unearthing the qualities which have long characterized a successfully accountable principal. The author lists these qualities in what he calls "old-fashioned but powerful terms:"

Lessinger, Leon M. (Cont'd)

The principal is a steward of parents' educational affairs.
The principal is a celebrant of his role in participating in the growth and development of children and staff.
The principal is an auditor of performance and improvement methods.
The principal is an entrepreneur of materials, resources for the students' and teachers' benefit.

Lopez, Felix M. "Accountability in Education," PHI DELTA KAPPAN VII: 231-235, December 1970.

Lopez lists his way through this article in presenting his views on accountability's purposes, implementations, failures.

He provides reasons that efforts to establish accountability programs materialized some underlying misconceptions that explain many failures.

1. Many programs have been installed without necessary background, organizational philosophy, determination of policies before beginning the program.
2. The administrative procedures seem to have tried to make the program accomplish a great deal with an oversimplified procedure.
3. The programs have been designed by specialists, not by those who are covered or who have to implement them. Also, they have been imposed to those who implement them without an explanation.
4. The measures of accountability have not even met minimum standards of reliability and relevancy. This is known as the "criterion problem" and is summarized below:

    a. Clear specifications are lacked in a criteria of effectiveness.
    b. When closely examined, objective measures are usually found to be either non-objective or irrelevant.
    c. Subjective measures are usually found to be biased or unreliable.
    d. Seemingly adequate criteria can vary over time.
    e. Position effectiveness is multi-dimensional. Effectiveness in one aspect of a position does not necessarily mean effectiveness in others.
    f. When effectiveness in different aspects of a position is measured, there is no positive way to combine them into a single index of effectiveness.
    g. Different performance patterns achieve the same degree of effectiveness in the same job.

In order to be successful, the accountability program must meet the following requirements:

1. Members are informed of what is to be accomplished, by whom, and how; wide participation in the obtainment of organization goals must be invited; and the attention of top management must be focused on the accomplishment of individual employees' personal goals.
2. The program must reflect an organizational philosophy that promotes confidence and trust in all members.
3. It must be based on ethical principles and sound policies that can be implemented by a set of dynamic, flexible, and realistic standards, procedures and practices.
4. It must clearly specify its purposes so that standards, procedures and practices can be conformed to them.
5. Must be designed primarily to improve the performance of each member in his current job duties.
6. If the supervisor discusses his evaluation with the subordinate poorly, the program will fail.
7. Those who use it, and are to be judged by it, need to participate in the design, installation, administration, and review of the total program.

Lopez, Felix M. (Cont'd)

Lopez names three interventions into the current system that are an approach to accomplish the above points in establishing accountability in education. These interventions are aimed at a distinct level of the organization structure: top, middle, and base (teachers). He describes each phase individually:

A. Intervention at the Top. This consists of the establishment of organizational goals by using a technique referred to in private industry as "Management by Objectives" (MBO) and in government as the "Planning, Programming, & Budgeting System" (PPBS). The underlying concept in establishing organizational goals is merely: The clearer the idea you have of what you want to accomplish, the greater your chance of accomplishing it. MBO constitutes an orderly way of goal setting at the top, communication of these goals to lower-unit managers, the development of lower-unit goals that are phased into those set by the higher levels, & comparison of results in terms of goals. The whole system is oriented to a value system based upon the results achieved; and the results must be concrete and measureable.

One way of implementing the goal-setting process that has been found useful in education is through the development of a charter of accountability. Each unit head is held accountable for the results specified in his charter, which he draws up and he and his superiors sign.

A charter contains a statement of purposes, goals, and objectives and contains the following features:

1. Statement of purposes or areas of concern and purposes of next level above the unit completing the charter.
2. Statement of the specific purposes of the unit completing the charter.
3. Description of the functional, administrative, and financial accountability necessary to accomplish the unit's purposes.
4. A set of basic assumptions about developments likely to affect the attainment of goals but which are beyond the control of accountability unit.
5. List of major goals of unit to be aimed for in the immediate five-year period.
6. Subseries of performance tasks that provide unit supervisors with definitive targets toward which to orient their specialized efforts and with which to define the resources necessary to accomplish them.
7. Statements of the authority and responsibility necessary to complete these tasks.

Lopez then briefly presents the pattern for explaining the process of establishing a charter of accountability:

1. A committee or council (school board, local school boards, teachers, parents and community groups) define the broad purposes of the school system, which are then discussed widely in the community.

Lopez, Felix M. (Cont'd)

2. Each major subunit (district, division, or department) prepares its charter, matching its criteria to its particular needs.
3. Charters of all units are collated and reviewed by central council or school council. The combined charters constitute the final and overall charter for the board of education and entire school system.
4. Subcharters are developed in the same way for individual units in each district, in which all members in system will ultimately have a voice.
5. Charters are implemented. It is usually advisable to stick with original charter until the year-end review and appraisal of results. Amendments may be made as experience dictates.
6. Results are compared to objectives, and as evaluation is made, plans for next charter are formulated.

B. Intervention in the Middle. Introducing accountability into a school system entails, secondly, the establishment of a massive supervisory development program. Its purpose is to disseminate information, to change attitudes and to impart specific skills, particularly the skill of conducting accountability interviews with subordinates. Programs would be given which would consist of learning experiences and exercises which require the supervisors to participate actively in the training sessions. Theoretical ideas and concepts that help develop new ways of thinking and approaching problems can be introduced and amplified through specifically designed case studies.

C. Intervention at the Base. The third and most pertinent phase of the accountability system is the development of specific instruments and techniques to evaluate how individual members of the school system are performing their assigned roles. This touches the teachers directly, and is the critical point in the program. There are some general principles that are essential for a teacher accountability program:

1. This program can function effectively only within the context of a goal-setting program (as in the charter) and a program of continuous supervisory development.
2. If accountability measures are used for other purposes besides improving performance (as salary increases, discipline, and promotion), the program will fail.
3. Feedback should be provided to render the teacher and supervisor with material for discussion of ways to strengthen professional performance. These instruments to measure and obtain feedback need to be meaningful and acceptable by the student. They must also yield means, standard scores, percentiles to serve as criteria for evaluation.

Lopez ends his article by stressing the importance of the accountability interview between the supervisor and teacher. There are certain prerequisites of this interview: The supervisor should have discussed his own performance with his supervisor and have participated in development of the charter of accountability. Also, both teacher and

Lopez, Felix M. (Cont'd)

supervisor must be aware of school's goals, and must have reviewed data resulting from accountability instruments. During the interview they will discuss material collected on the teacher's performance: they analyze teacher strengths and explore ways of capitalizing on them. They identify areas for improvement, develop an improvement plan and choose resources to instigate it. The teacher may discuss professional problems with his supervisors. They will need to establish follow-schedules with milestones to determine progress, and put their decisions in writing to be discussed in subsequent review.

"The accountability program, sincerely pursued at all these levels (top, middle, base) is guaranteed to achieve positive results."

Miller, William C. "Accountability Demands Involvement," EDUCATIONAL LEADERSHIP 29:613-617, April 1972.

Educational assessment, decentralization, educational audits, cost effectiveness, performance contracts, behavioral objectives--these are efforts at establishing accountability in education. Miller offers this definition of accountability: Holding an individual or group responsible for a level of performance or accomplishment for specific pupils.

If specific individuals are to be accountable, they must know exactly what results are sought. Therefore, the goals of the instructional program will have to be made crystal clear. New emphasis will be placed on diagnosing and meeting learner needs. It is likely that program goals will often be stated in performance terms. Behavioral objectives will be developed for each activity thus clarifying the purposes of all programs and making it possible more easily to assess results. An intensification of prescriptive teaching, individualization of instruction, and personalized evaluation will take place. Better learning on the part of pupils and better attitudes toward school should be a result.

The following characteristics of a successful system of accountability are examined:

- The nature and extent of the accountability will have to be clearly defined and realistically delineated.
- The individual (or group) who is to be accountable for accomplishing a given task must have a sizable measure of control over the identification of the task, the manner in which the task is to be undertaken, the resources required, and the means and methods of evaluation.
- In-service education will be an important initial and ongoing part of implementing a successful system of accountability.
- Instituting a system of accountability will require establishing new relationships and taking on new roles.
- General class goals and overall school goals would be developed.
- All participants would accept some accountability.

Millman, Jason. "Reporting Student Progress: A Case for a Criterion-Referenced Marking System," PHI DELTA KAPPAN 52:226-229, December 1970.

The purpose of this article, according to Millman, is to indicate how increased implementation of individualized instruction and criterion-referenced testing invite a different format than that presently used for the reporting of school progress to students and to their parents.

Individualized instruction can be accomplished two ways. 1) use of self-teaching materials (pacing) and, 2) providing alternative instructional materials (branching). Since the student is working on his own individually, the proper method of testing would not be to compare his performance with that of others (norm-referenced testing), but to assess him with some criterion, or performance standard in which the meaningfulness of an individual score is not dependent on comparison to others (criterion-referenced).

The grading systems which use number or letter scales do not complement the criterion-referenced tests; these are merely ranking devices, thus it is not useful for indicating an individual's progress against performance criteria. Student records should contain a listing of skills to be checked as proficiency is demonstrated, but so could the reports going to the students and their parents. The essential features of such a report card are: a listing of objectives (probably abbreviated descriptions of tasks); space to indicate if proficiency has been demonstrated; and a checking system which identifies objectives achieved since the previous report. Since parents desire norm-referenced information, some grade designation might be included at the lower grades. For high schools or junior college courses, usually demonstrated skills may be differentiated from optional or supplementary skills.

Because of work already done, it is not necessary to expect the typical school to itemize, from scratch, a comprehensive set of objectives and to construct related criterion-referenced measures. In the elementary schools, students often use workbooks containing exercises which may serve as criterion-referenced tests. Also, the objectives of many new curricula have already been identified and test items covering these have been provided. The staff in individual school systems is more often constructing "behaviorally stated" objectives in conjunction with learning packages covering these objectives. Commercial firms are now including tests in their learning packages also. The largest effort in this regard is the Instructional Objectives Exchange, which was created to serve as a clearing-house through which the nation's schools can exchange instructional objectives. Functions also include collecting and developing measuring techniques suitable for assessing the attainment of the objectives available through the Exchange, and developing objectives in important areas where none currently exist. With the help of this, the staff may then select the proper objectives, rather than construct them.

In operating the system, the students must assume an increased responsibility for their own activities. In some cases, these criterion-referenced tests may be self-administered and self-graded. The teacher

Millman, Jason (Cont'd)

need only place a single check mark or date to record the fact that proficiency has been demonstrated. These checks may be transferred to cards at reporting periods.

When a system begins implementing such a program, it need not convert to the criterion-referenced reporting system in all subject areas at once. This conversion may be made first in subject areas where the defining and measuring of objectives is easiest. These areas would include mathematics and those vocationally oriented courses in which a large segment of the objectives involves performance skills.

The advantages in implementing such a program include: a higher degree of communication and accountability to the parent is attained; every student will be shown to be learning, and both parent and student will know better what has been learned and what can be done. Also, the competition is the student and himself, instead of another person.

Limitations and objections to this criterion-referenced system have been raised. Millman ends his article by relating some of these and some possible cures. One feared danger is that objectives involving hard-to-measure qualities like appreciations and attitudes may be slighted. Millman suggests using what has been called "expressive objectives"--certain tasks or encounters are to be experienced. The author provides the example of visiting a slum area. Another danger involves the ability to retain and transfer what is learned. To ascertain if skills are retained, the criterion-referenced tests could be given at a later date.

Two other real problems in dealing with this system include: specifying the universe of tasks and determining the standards. Some things can be done to deal partially with these two problems. Tasks should be constructed which sample a great range of situations and methods covered by the objective. For example, pictures can be used to include only comparisons of objects of the same class and to exclude items which require reading and fine perceptual discriminations. In dealing with the second problem of performance standards, perfect or near-perfect performance should be required if (a) the objective is worded such that near mastery is expected (b) the skills are deemed important for future learning (c) items are objective (d) the test is short and thus likely to be unreliable.

Millman closes his article by stating that many of the problems encountered will be minimized with increased experience with this mode of assessing school progress. "But when a school staff is committed to changing students, to helping them grow and learn and feel, and to focusing on outcomes, then reporting school progress using a criterion-referenced measurement system not only follows logically, but there is, in fact, no viable alternative."

Nash, Robert J. "Accountability--The Next Deadly Nostrum in Education?" SCHOOL & SOCIETY 99:501-503, December 1971.

Amid the controversy of whether or not accountability is a valid concept or just another educational "cure-all," Nash asks four basic questions to stimulate thought.

1. Who is accountable?
   "According to the advocates of accountability, educators must be held responsible if children fail to learn." But Nash contends that this responsibility is not fair since much is not understood about the student's life or "the complex inter-relationships which cohere among the home, community, peer group, the media, and the school." The only manner in which the educator may be indicted for the failure of the pupil is when he makes false assumptions about what is important for the students to learn, as well as what should be omitted in the name of accountability. Nash extends the responsibilities of accountability by saying that the concept must be stretched to include learning failures which occur after the students have left their classrooms.
2. For what are we accountable?
   "Perhaps the single most serious limitation of accountability, at the present time, resides in the kinds of learnings for which we are becoming responsible." Nash feels that since accountability must be measurable to be evaluated, that the student's personal concerns are overlooked. Consequently, measurable subjects such as math may be more favorable than art, music, theater & dance. If this happens, educators are accountable for ignoring the possibilities for learning which cannot be measured.
3. To whom are we accountable?
   "As educators, we ought to be accountable primarily to those clients we directly serve--students, parents, and taxpayers." But Nash says it is unfair for teachers to be held responsible to these since the teacher has such a minute voice in decisions and practices which set standards. Outside forces may become prominent in sharing accountability responsibility. The federal government has funded national companies to teach. Nash feels that the danger here is that educational needs of children and parents will be subordinated to what a national authority thinks a community's needs should be.
4. When are we accountable?
   "We are accountable when we are the cause of something." We must be aware of the implications of our educational activities and try to foresee outcomes of learning activities; for we are accountable when we convey intended or unintended values. An example is stated: if our responsibility to clients (students) is solely teaching them to read, write and compute, an unintended outcome can be the production of "robots."

In summary, Nash says that accountability is only valid if we hold ourselves accountable for purposes which are always larger than skill and knowledge proficiencies. The most conclusive of its affectiveness "will be whether educators have helped to produce the humanely responsive people who are needed to create a humanely responsive social order."

NEA Research Division. "Teacher Opinion Poll: Accountability, Vouchers, and Performance Contracting," TODAY'S EDUCATION 60:13, December 1971.

A recent Teacher Opinion Poll showed that the nation's public school teachers as a whole are opposed to accountability payment, a voucher plan, or performance contracting. More teachers oppose accountability payment (88%) than oppose a voucher plan (71%), and more oppose a voucher plan (71%) than oppose performance contracting (48%). Teachers with negative views on accountability outnumber those with positive views by 11 to 1, while about 3 1/2 times as many oppose as favor a voucher plan. On performance contracting, opinions are more evenly divided with about 1 1/4 as many opposed as in favor.

On accountability, the survey addressed the following question to a nationwide sample of public school classroom teachers:

"Do you think public school teachers should be paid according to the achievement of their pupils (accountability)?"

Responses were as follows:

	Yes	No	No Opinion
In the elementary school	7.9%	88.0%	4.1%
In the secondary school	7.5%	87.6%	4.8%

The results of this survey strongly suggest that public school teachers in general do not believe that the type of competition for money customary in the business world should be applied to education.

Norton, Robert E. "The Relationship Between Evaluation and Accountability," AMERICAN VOCATIONAL JOURNAL 47:61-65, February 1972.

Norton begins by offering some definitions of accountability as follows:

Leon Lessinger has defined it as "the process designed to insure that any individual can determine for himself if the schools are producing the results promised."

Lessinger, on another occasion, defined it as a "policy declaration adopted by a legal body such as a board of education or a state legislature requiring regular outside reports of dollars spent to achieve results." The concept, he said, rests on three fundamental bases: student accomplishment, independent review of student accomplishment, and a public report, relating dollars spent to student accomplishment.

Myron Lieberman comments on the many variations in definition of accountability this way: "At a common sense level, there is accountability when resources and efforts are related to results in ways that are useful for policy making, resource allocation, or compensation."

For the purpose of this paper, accountability is characterized as being concerned with both program effectiveness and program efficiency (the relationship of costs to results). It also includes public disclosure of the findings and implies that those responsible for a program must be able to justify their decisions and actions as well as interpret the costs and value of their effects.

He then defines program evaluation as the process of collecting and providing useful information for the purpose of making sound decisions about programs.

The remainder of the paper is devoted to a discussion of Cost Effectiveness, Local Program Evaluation, Needs Assessment, Evaluation of Process, and Evaluation of Product. He concludes by stating that the major challenge is the need to refine both our theory and methodology of evaluation.

Stufflebeam, Daniel L. "The Relevance of the CIPP Evaluation Model for Educational Accountability," JOURNAL OF RESEARCH AND DEVELOPMENT IN EDUCATION 5:19-23, Fall 1971.

Stufflebeam focuses his paper on the CIPP evaluation model, outlining for practitioners the implications of CIPP to school accountability.

Accountability is defined in this article as the ability to account for past actions in relationship to the decisions which precipitated the actions, the wisdom of those decisions, the extent to which they were adequately and efficiently implemented, and the value of their effects.

The CIPP Model defines evaluation as the process of delineating, obtaining, and providing useful information for judging decision alternatives. This definition contains three important points: first, evaluation is a systematic, continuing process; second, the evaluation process includes three basic steps: the delineating of questions to be answered and information to be obtained, the obtaining of relevant information, and the providing of information to decision makers for their use to make decisions and thereby to improve ongoing programs; and, third, evaluation serves decision making. Four kinds of decisions are specified by the CIPP Model: planning decisions, structuring decisions, implementing decisions, and recycling decisions.

The author states that the CIPP Model provides a powerful framework for meeting decision-making and accountability needs. Two final points are made concerning the implementation of the CIPP Model: first, both internal evaluation and external evaluation are required, and second, there must be a cybernetic relationship between evaluation and all decision-making levels in the system.

In conclusion, the author states that the preceding analysis supports the thesis that the CIPP Evaluation Model provides both pro-active support for decision making and retroactive support for accountability. Proper implementation of the model will yield significant improvements over typical social accounting and standardized test information systems in providing information for a wide range of decision making and accountability questions.

Tyler, Ralph W. "Testing for Accountability," NATION'S SCHOOLS 86:37-9, December 1970.

In this short article Tyler presents his ideas on which type of tests are valid for students. He feels that most tests currently available are not very suitable in measuring how much and what the student has learned in a period of time. He feels that standard achievement tests used in performance contracting do not measure accurately how much children have learned since performance contracting generally covers disadvantaged children. These standard achievement tests are norm-referenced tests since from sampled testing they arrive at typical questions; those that have not been missed or answered correctly by the majority. This type of test, however does not measure fairly the slow or advanced student--these tests are also used through the nation, despite the student's background.

Tyler is in favor of the criterion-referenced tests--designed to sample specified knowledge, skills and abilities and to report what the child knows and can do these matters specified. His pleas are that "publishers may well respond by a crash program of criterion-referenced test development."

NOTE: For extensive information of the criterion-referenced test, see "Reporting Student Progress: A Case for A Criterion-referenced Marking System," by Jason Millman (Phi Delta Kappan 52, December 1970) and James W. Popham's book CRITERION REFERENCED MEASUREMENT.

Underwood, Kenneth E. "Before You Decide to be 'Accountable,' Make Sure You Know for What," AMERICAN SCHOOL BOARD JOURNAL 158:32-33, September 1970.

Underwood feels that educators buy any idea if it is labeled "innovative," but that boardmen and administrators are going to be held accountable for their actions and the rationale of innovations. He believes that superintendents and school board members cannot figure out how and where educational programs go wrong because they usually do not have concrete, specific and measurable objectives stated for all instructional programs.

To be effective, innovation must be based on a firmly established system of measurement--thus, accountability. "The fact is that only those school boards that have anticipated specific, concrete and measurable instructional objectives will be able to determine instructional program failures and deficiencies, which then can be tallied to determine the priority of financial allocations for resolving each identified instructional weakness--you know what to spend your money for." School boards can then bring themselves to an informed position in bringing about change or innovation directed at specific and identified deficiencies. Therefore, once the school board singles out an approach for developing a rational innovation that will eliminate failures in predetermined goals, it is in a sound position to determine whether the innovation actually works. The only way that superintendents and boardmen will ever determine the need for modifying programs so as to provide the greatest instructional output per tax dollar input is to continually reappraise objectives, deficiencies, failures and priorities on at least an annual basis.

Underwood, Kenneth E. "Here's the Fargo Board's Easygoing Measurement and Accountability Program," AMERICAN SCHOOL BOARD JOURNAL 158:32-33, September 1970.

Superintendent of public schools in Fargo, North Dakota Underwood provides a bird's-eye view of the formula that assures the rational and logical administration of educational change and innovation as discussed in the first part of the article.

At the top of his organizational pyramid is the school district's curriculum council. Below is gathered subject area study committees. These subcommittees are chaired by a building administrator whose major field is different from the subject area of the committee. The subgroup consists of 4 people, chosen by application review, representing K-3 and 4-6 grade levels. Also the two junior high department chairmen and two high school department chairmen serve on each subgroup.

After in-service training where program objectives are developed, the study committees formulate program objectives. These objectives must be measurable and practical. The curriculum council review all of these objectives and limit or modify these before they are submitted to the school board for approval. After receiving this information, the board and superintendent make the final determination about how priorities will be established for funding those programs designated as priority. The same team also determines the extent of program deficiency and failure within a specific area and allocates money according to those failures that are most detrimental to overall education in the district. To make these decisions, two factors are involved:

1. the most important programs in the total curriculum
2. the important programs where there is a high rate of failure.

Without the program objectives, it would be impossible to tell which priority programs need a monetary shot in the arm. These objectives are not nebulous; an example would be: ALL children of an elementary reading program shall demonstrate a growth of 1.0 reading levels per year as measured by the Iowa Test of Basic Skill. Nationally normed and standardized tests are used as often as possible In those subjects where no tests (or inappropriate tests are available), the district develops evaluation instruments based on the curricular program and material used in Fargo. A few sub-areas such as physical education and music are still lacking suitable yardsticks for measuring accomplishment.

Deciding when an educational objective has been attained is also delicate. The sub-group usually supplies information about what is expected of students in a given grade or sub-level. From that point the board and superintendent usually raise the level of attainment slightly to assure the district's striving for optimal performance.

After the board lines up all the deficiencies side by side, it determines whether one is more serious than another, then prorates the money accordingly. At that point, innovations or changes should be introduced, but only if they are based on legitimately identified priority deficiencies.

Wildavsky, Aaron. "A Program of Accountability for Elementary Schools," PHI DELTA KAPPAN 52:212-216, December 1970.

Wildavsky relates that achievement in the two major areas, reading and mathematics, must be evaluated in terms of standardized tests. To avoid the teachers cheating on these tests by feeding the pupils test information, testing should be turned over to a state agency or a private business that will fairly conduct and administer the test.

In addition to standardized tests, an accountability program also requires significant norms. The pros and cons of four methods of setting these methods are discussed:

1. National standards for reading or math by grade - problems arise when the norm is discouragingly high in some systems, or so low that progress could not be measured.
2. Setting the norm to make it subject to bargaining between local school boards, teachers, parents, principals. The dangers here would be a competition for power among the groups, or unfairly high or low norms set.
3. Dividing the elementary pupils in the city into 5 or 6 groups based on the mean score by grade on the standardized tests. Students would be tested each September and focus would be on the rate of change during the year. But perhaps the students who perform better initially are also the ones who show the greatest rate of change; in order to improve total performance, teachers and principals might concentrate most on the pupils who need it least. A solution could be requiring median in addition to mean scores so that the school gets rewarded more for improvements among those students who start out at lower levels of performance than for those who start at higher levels.
4. The author's preference, this fourth alternative, involves setting different norms for different students based largely on terms of previous opportunities based on a short list of extra school variables, i.e., socio-economic level, rate of movement from one neighborhood and one school to another, etc. Each elementary school could be placed into 5 or 6 rank-ordered groups according to student performance on standardized tests, with results given 3 weeks after schools start and again around the 1st of June. The norms against which progress is measured would not be the same for the city, but would differ in each of the 5 or 6 groups. The five top schools within each sub-group could be taken together and their current achievement and average growth used as the normative standard. If the heterogeneity within the schools is great, however, it will be difficult to make sense out of the performance of the school as a whole, which will necessitate dealing with different classes of students throughout the entire system.

Within the school system, Wildavsky recommends the principal as being the center of accountability "because he is the one with the essential power in the system." In order for this to be fair, however, all principals need the same kind of administrative help: "either administrative help must be equalized or principals with a lack of it must not be expected to do as well." The requirement he must face is that the school as a whole show reasonable progress. As the amount of progress is discovered, everyone would presumably know, and parents

Wildavsky, Aaron (Cont'd)

would tend to send their children to those schools performing better--thus improving the better schools and leaving the less fortunate worse off. To prevent this, it would be better to restrict movement and place emphasis on improving the performance in schools that show the least progress in meeting the norms.

Wildavsky discusses sanctions for poorly performing schools and rewards for well performing schools. Those performing well should receive recognition, promotion, and freedom (right to innovate teaching methods and curriculum). Before sanctions are provided for the poorly performing schools, supervisory help should be given. If a teacher or principal consistently perform poorly, it should be possible to transfer or remove him from the system.

The last part of the article deals with the advantages and disadvantages of the accountability program on teachers, principals, parents, superintendent, board of education, and children.

1. Teachers are advantaged in that they can see improvement upon the increasing of scores, and if a teacher can show that her students have made progress, she is not subject to arbitrary action by the principal. If a teacher consistently fails, however, she could suffer due to a feeling of failure.
2. Principals - they may feel disadvantaged by the fact that they are responsible for behavior of students and teachers which they find it difficult to control.

   On the other hand, if performance is poor, a principal can move to change a teacher with more than the ordinary amount of justification. He also has more tangible ways to show his administrative superiors he is doing a good job.
3. Parents - may like accountability because they will have a mechanism for appraising their children's performance; knowledge of whether their children are making progress with regard to the norms of accountability should help the parents realize where legitimacy lies in the complaints made by their children or school critics. On the other hand, parents may not appreciate the fact that the program will not inculcate cultural or political values; accountability is not a neutral device--for its basic function is basic cognitive and mathetical skills; cultural, artistic, or political values would not be dominant.
4. Superintendent - farthest from the classroom, the superintendent should find testing results invaluable. There is danger here that even if the superintendents instigate new methods they think will improve the performance, rates of growth may not change at all because of a particular norm of accountability that has been specified.
5. Board of Education can find accountability of great use in defining problem areas and questing the sup. about them. The board's greatest self-appointed role will be to monitor the system of accountability and suggest revisions of it to the interested parties.
6. Children - these may be hardest to please as they get older: they may dislike the idea that a single set of norms appears to define them; they may fear publicity given out about their personal grades; may not want their parents to know how badly they are doing. The students

Wildavsky, Aaron (Cont'd)

will be advantaged in that if they perform at an acceptable level, they will be given special liberties in taking courses.

Two Articles on Accountability From

PHI DELTA KAPPAN

December 1970

. "An Approach to Developing Accountability Measures for the Public Schools" by Stephen M. Barro

. "Toward Objective Criteria of Professional Accountability in the Schools of New York City" by Henry S. Dyer

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Barro, Stephen M. "An Approach to Developing Accountability Measures for the Public Schools," PHI DELTA KAPPAN LII:196-205, December 1970.

The Concept of Accountability

Although the term "accountability" is too new in the educational vocabulary to have acquired a standard usage, there is little doubt about its general meaning and import for the schools. The basic idea it conveys is that school systems and schools, or, more precisely, the professional educators who operate them, should be held responsible for educational outcomes--for what children learn. If this can be done, it is maintained, favorable changes in professional performance will occur, and these will be reflected in higher academic achievement, improvement in pupil attitudes, and generally better educational results. This proposition--that higher quality education can be obtained by making the professionals responsible for their product--is what makes accountability an attractive idea and provides the starting point for all discussion of specific accountability systems and their uses in the schools.

The unusual rapidity with which the accountability concept has been assimilated in educational circles and by critics of the schools seems less attributable to its novelty than to its serviceability as a unifying theme. Among its antecedents, one can identify at least four major strands of current thought and action in education: (1) the new, federally stimulated emphasis on evaluation of school systems and their programs; (2) the growing tendency to look at educational enterprises in terms of cost effectiveness; (3) increasing concentration on education for the disadvantaged as a priority area of responsibility for the schools; and (4) the movement to make school systems more directly responsive to their clientele and communities, either by establishing decentralized community control or by introducing consumer choice through a voucher scheme. Under the accountability banner, these diverse programs for educational reform coalesce and reinforce one another, each gaining strength and all, in turn, strengthening already powerful pressures for educational change.

How the Schools Can Be Made Accountable

Accountability in the abstract is a concept to which few would take exception. The doctrine that those employed by the public to provide a service--especially those vested with decision-making power--should be answerable for their product is one that is accepted readily in other spheres and that many would be willing to extend, in principle, to public education. The problems arise in making the concept operational. Then it becomes necessary to deal with a number of sticky questions:

> To what extent should each participant in the educational process--teacher, principal, and administrator--be held responsible for results?

Barro, Stephen M. (Continued)

To whom should they be responsible?

How are "results" to be defined and measured?

How will each participant's contribution be determined?

What will be the consequences for professional educators of being held responsible?

These are the substantive issues that need to be treated in a discussion of approaches to implementing the accountability concept.

Various proposals for making the schools accountable differ greatly in the degree to which they would require existing structures and practices to be modified. In fact, it is fair to say they range from moderate reform to revolution of the educational system. The follow paragraphs summarize the major current ideas that, singly or in combination, have been put forth as approaches to higher quality education through accountability:

Use of improved, output-oriented management methods. What is rapidly becoming a new "establishment" position--though it would have been considered quite revolutionary only a few years ago--is that school district management needs to be transformed if the schools are to become accountable and produce a better product. The focus here is on accountability for effective use of resources. Specific proposals include articulation of goals, introduction of output-oriented management methods (planning-programming-budgeting, systems analysis, etc.), and--most important--regular, comprehensive evaluation of new and on-going programs. Mainly internal workings of the school system rather than relations between school and community would be affected, except that better information on resource use and educational outcomes would presumably be produced and disseminated.

Institutionalization of external evaluations or educational audits. Proposals along this line aim at assuring that assessments of educational quality will be objective and comparable among schools and school districts and that appropriate information will be compiled and disseminated to concerned parties. They embody the element of comparative evaluation of school performance and the "carrot" or "stick" associated with public disclosure of relative effectiveness. A prototype for this function may be found in the "external educational audit" now to be required for certain federal programs. However, the need for consistency in examining and comparing school districts suggests that a state or even a federal agency would have to be the evaluator. This would constitute a significant change in the structure of American public education in that it would impose a centralized quality-control or "inspectorate" function upon the existing structure of autonomous local school systems.

Performance incentives for school personnel. Perhaps the most direct way to use an accountability system to stimulate improved performance

Barro, Stephen M. (Continued)

is to relate rewards for educators to measures of effectiveness in advancing learning. One way to do this is to develop pay schedules based on measured performance to replace the customary schedules based on teaching experience and academic training. An alternative approach would be to use differentiated staffing as the framework for determining both pay and promotion. The latter is a more fundamental reform in that it involves changes in school district management and organization as well as changes in the method of rewarding teachers. Professional organizations have tended to oppose such schemes, partly out of fear that performance criteria might be applied subjectively, arbitrarily, or inequitably. Although this may not be the only objection, if a measurement system could be developed that would be widely recognized as "objective" and "fair," the obstacles to acceptance of a system of performance incentives might be substantially reduced.

Performance or incentive contracting. Performance contracting rests on the same philosophy as the proposals for incentives, but applies to organizations outside the school system rather than individual professionals within it. A school district contracts with an outside agency--a private firm or, conceivably, a nonprofit organization--to conduct specified instructional activities leading to specified measurable educational results. The amount paid to the contractor varies according to how well the agreed-upon objectives are accomplished, thereby providing a very direct incentive for effective instruction. At present, there is too little experience with performance contracting to support conclusions about its potential. However, a large number of experiments and several evaluation efforts are under way.* Should they prove successful, and should this very direct method of making the purveyor of educational services responsible for his product become widely used, there would undoubtedly be substantial and lasting effects on both the technology and organization of American public education.

Decentralization and community control. These are two conceptually distinct approaches to accountability that we lump together under one heading only because they have been so closely linked in recent events. Administrative decentralization, in which decision-making authority is shifted from central administrators to local area administrators or individual school principals, can itself contribute to accountability. The shift of authority should, for example, favor greater professional responsiveness to local conditions and facilitate the exercise of local initiative. Also, it allows responsibility for results to be decentralized and, in so doing, provides the framework within which various performance incentives can be introduced.

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*An experiment involving 18 districts and testing several different forms of performance contracting is being carried out in 1970-71 under sponsorship of the Office of Economic Opportunity. Also, the Department of Health, Education, and Welfare has contracted with the Rand Corporation to carry out an evaluation of other efforts to plan and implement performance contracts.

Barro, Stephen M. (Continued)

The movement for community control of the highly bureaucratized, big-city school systems aims at accountability in the sense of making the system more representative of and responsive to its clientele and community. In the context of community control, accountability can be defined very broadly to include not only responsibility for performance in achieving goals, but also for selecting appropriate or "relevant" goals in the first place. Most important, community control provides the means of enforcing accountability by placing decision-making and sanctioning powers over the schools in the hands of those whose lives they affect.

Alternative educational systems. Probably the most radical proposal for achieving better education through improved accountability is this one, which would allow competing publicly financed school systems to coexist and would permit parents to choose schools for their children. Usually this is coupled with a proposal for financing by means of "educational vouchers,"[1] although this is not the only possible mechanism. The rationale for this "consumer-choice" solution is that there would be direct accountability by the school to the parent. Furthermore, there would be an automatic enforcement mechanism: A dissatisfied parent would move his child--and funds--to another school. Of course, the burden of becoming informed and evaluating the school would be on the individual parent. At present, there is very little experience with a system of this kind and little basis for judging how well it would operate or what effect it would have on the quality of education.

The Need for Accountability Measures

These proposals, though not mutually exclusive, are quite diverse both with respect to the kinds of restructuring they would imply and the prospective educational consequences. However, they are alike in one important respect: Each can be carried out only with adequate information on the individual and the collective effectiveness of participants in the educational process. At present, such information does not exist in school systems. Therefore, a major consideration in moving toward accountability must be development of information systems, including the data-gathering and analytical activities needed to support them. This aspect of accountability--the nature of the required effectiveness indicators and the means of obtaining them--will be the principal subject of the remainder of this paper.

Progress in establishing accountability for results within school systems is likely to depend directly on success in developing two specific kinds of effectiveness information: (1) improved, more comprehensive pupil performance measurements; and (2) estimates of contributions to measured pupil performance by individual teachers, administrators, schools, and districts. As will be seen, the two have very different implications. The first calls primarily for expansion and refinement of what is now done in the measurement area. The second requires a kind of analysis that is both highly technical and new to school systems and poses a much greater challenge.

Barro, Stephen M. (Continued)

The need for more extensive pupil performance measurement is evident. If teachers, for example, are to be held responsible for what is learned by their pupils, then pupil performance must be measured at least yearly so that gains associated with each teacher can be identified. Also, if the overall effectiveness of educators and schools is to be assessed, measurement will have to be extended to many more dimensions of pupil performance than are covered by instruments in common use. This implies more comprehensive, more frequent testing than is standard practice in most school systems. In the longer run, it will probably require substantial efforts to develop and validate more powerful measurement instruments.

But no program of performance measurement alone, no matter how comprehensive or sophisticated, is sufficient to establish accountability. To do that, we must also be able to attribute results (performance gains) to sources. Only by knowing the contributions of individual professionals or schools would it be possible, for example, for a district to operate an incentive pay or promotion system; for community boards in a decentralized system to evaluate local schools and their staffs; or for parents, under a voucher system, to make informed decisions about schools for their children. To emphasize this point, from now on the term "accountability measures" will be used specifically to refer to estimates of contributions to pupil performance by individual agents in the educational process. These are described as "estimates" advisedly, because, unlike performance, which can be measured directly, contributions to performance cannot be measured directly but must be inferred from comparative analysis of different classrooms, schools, and districts. The analytical methods for determining individual contributions to pupil performance are the heart of the proposed accountability measurement system.

A Proposed Approach

In the following pages we describe a specific approach that could be followed by a school system interested in deriving accountability measures, as they have just been defined. First, a general rationale for the proposed approach is presented. Then the analytical methodology to be used is discussed in more detail.

For what results should educators be held responsible? Ideally, a school system and its constituent parts, as appropriate, should be held responsible for performance in three areas: (1) selecting "correct" objectives and assigning them appropriate priorities, (2) achieving all the stated (or implicit) objectives, and (3) avoiding unintentional adverse effects on pupils. Realistically, much less can even be attempted. The first of the three areas falls entirely outside the realm of objective measurement and analysis, assessment of objectives being an intrinsically subjective, value-laden, and often highly political process. The other two areas can be dealt with in part, subject to the sometimes severe limitations to the current state of the art of educational measurement. The answer to the question posed above must inevitably be a compromise, and not necessarily a favorable one,

Barro, Stephen M. (Continued)

between what is desirable and what can actually be done.

Any school system aims at affecting many dimensions of pupil performance. In principle, we would like to consider all of them--appropriately weighted--when we assess teacher, school, or district effectiveness. In practice, it is feasible to work with only a subset of educational outcomes, namely, those for which (a) objectives are well defined and (b) we have some ability to measure output. The dimensions of performance that meet these qualifications tend to fall into two groups: first, certain categories of cognitive skills, including reading and mathematics, for which standardized validated tests are available; second, certain affective dimensions--socialization, attitudes toward the community, self-concept, and the like--for which we have such indicators or proxies as rates of absenteeism, dropout rates, and incidence of vandalism and delinquency. For practical purposes, these are the kinds of educational outcome measures that would be immediately available to a school system setting out today to develop an accountability system.

Because of the limited development of educational measurement, it seems more feasible to pursue this approach to accountability in the elementary grades than at higher levels, at least in the short run. Adequate instruments are available for the basic skill areas--especially reading--which are the targets of most efforts to improve educational quality at the elementary level. They are not generally available--and certainly not as widely used or accepted--for the subject areas taught in the secondary schools. Presumably, this is partly because measurement in those areas is inherently more difficult; it is partly, also, because there is much less agreement about the objectives of secondary education. Whatever the reason, establishing accountability for results at the secondary level is likely to be more difficult. Pending further progress in specifying objectives and measuring output, experiments with accountability measurement systems would probably be more fruitfully carried on in the elementary schools.

Fortunately, existing shortcomings in the measurement area can be overcome in time. Serious efforts to make accountability a reality should, themselves, spur progress in the measurement field. However, for the benefits of progress to be realized, the system must be "open"--not restricted to certain dimensions of performance. For this reason, the methodology described here has been designed to be in no way limiting with respect to the kinds of outcome measures that can be handled or the number of dimensions that can ultimately be included.

Who should be accountable for what? Once we have determined what kinds of pupil progress to measure, we can turn to the more difficult problem of determining how much teachers, principals, administrators, and others have contributed to the measured results. This is the key element in a methodology for accountability measurement.

The method proposed here rests on the following general principle: Each participant in the educational process should be held responsible

Barro, Stephen M. (Continued)

only for those educational outcomes that he can affect by his actions or decisions and only to the extent that he can affect them. Teachers, for example, should not be deemed "ineffective" because of shortcomings in the curriculum or the way in which instruction is organized, assuming that those matters are determined at the school and district level and not by the individual teacher. The appropriate question is, "How well does the teacher perform, given the environment (possibly adverse) in which she must work and the constraints (possibly overly restrictive) imposed upon her?" Similarly, school principals and other administrators at the school level should be evaluated according to how well they perform within constraints established by the central administration.

The question then arises of how we know the extent to which teachers or administrators can affect outcomes by actions within their own spheres of responsibility. The answer is that we do not know a priori; we must find out from the performance data. This leads to a second principle: The range over which a teacher, a school principal, or an administrator may be expected to affect outcomes is to be determined empirically from analysis of results obtained by all personnel working in comparable circumstances. Several implications follow from this statement. First, it clearly establishes that the accountability measures will be relative, involving comparisons among educators at each level of the system. Second, it restricts the applicability of the methodology to systems large enought to have a wide range of professional competence at each level and enough observations to permit reliable estimation of the range of potential teacher and school effects.* Third, it foreshadows several characteristics of the statistical models needed to infer contributions to results. To bring out the meaning of these principles in more detail, we will explore them from the points of view of teachers, school administrators, and district administrators, respectively.

Classroom teachers. We know that the educational results obtained in a particular classroom (e.g., pupils' scores on a standard reading test) are determined by many other things besides the skill and effort of the teacher. The analyses in the Coleman report,[2] other analyses of the Coleman survey data,[3] and other statistical studies of the determinants of pupil achievement[4] show that a large fraction of variation in performance levels is accounted for by out-of-school variables, such as the pupils' socioeconomic status and home environment. Another large fraction is attributable to a so-called "peer group" effect; that is, it depends on characteristics of a pupil's classmates rather than on what takes place in the school. Of the fraction of the variation that is explained by school variables, only part can be attributed to teachers. Some portion must also be assigned to differences in resource availability at the classroom and school level and differences among schools in the quality of their management and support. Thus, the problem is to separate out the teacher effect from all the others.

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*This does not mean that accountability cannot be established in small school districts. It does mean that the analysis must take place in a broader context, such as a regional or statewide evaluation of performance, which may encompass many districts.

Barro, Stephen M. (Continued)

To illustrate the implications for the design of an accountability system, consider the problem of comparing teachers who teach very different groups of children. For simplicity, suppose that there are two groups of pupils in a school system, each internally homogeneous, which we may call "middle-class white" and "poor minority." Assume that all nonteacher inputs associated with the schools are identical for the two groups. Then, based on general experience; we would probably expect the whole distribution of results to be higher for the former group than for the latter. In measuring gain in reading performance, we might well find, for example, that even the poorest teacher of middle-class white children obtains higher average gains in her class than the majority of teachers of poor minority children. Moreover, the ranges over which results vary in the two groups might be unequal.

If we have reason to believe that the teachers associated with the poor minority children are about as good, on the average, as those associated with the middle-class white children--that is, if they are drawn from the same manpower pool and assigned to schools and classrooms without bias--then it is apparent that both the difference in average performance of the two groups of pupils and the difference in the range of performance must be taken into account in assessing each teacher's contribution. A teacher whose class registers gains, say, in the upper 10% of all poor minority classes should be considered as effective as one whose middle-class white group scores in the upper 10% for that category, even though the absolute performance gain in the latter case will probably be much greater.

This illustrates that accountability measures are relative in two senses. First, they are relative in that each teacher's contribution is evaluated by comparing it with the contributions made by other teachers in similar circumstances. In a large city or state school system, it can safely be assumed that the range of teacher capabilities covers the spectrum from poor to excellent. Therefore, the range of observed outcomes, after differences in circumstances have been allowed for, is likely to be representative of the range over which teacher quality can be expected to influence results, given the existing institutional framework. It may be objected that the range of outcomes presently observed understates the potential range of accomplishment because present classroom methods, curricula, teacher training programs, etc., are not optimal. This may be true and important, but it is not relevant in establishing teacher accountability because the authority to change those aspects of the system does not rest with the teacher.

Second, accountability measures are relative in that pupil characteristics and other nonteacher influences on pupil performance must be taken fully into account in measuring each teacher's contribution. Operationally, this means that statistical analyses will have to be conducted of the effects of such variables as ethnicity, socioeconomic status, and prior educational experience on a pupil's progress in a given classroom.

Barro, Stephen M. (Continued)

Also, the effects of classroom or school variables other than teacher capabilities will have to be taken into account. Performance levels of the pupils assigned to different teachers can be compared only after measured performance has been adjusted for all of these variables. The statistical model for computing these adjustments is, therefore, the most important element in the accountability measurement system.

School administrators. Parallel reasoning suggests that school administrators can be held accountable for relative levels of pupil performance in their schools to the extent that the outcomes are not attributable to pupil, teacher, or classroom characteristics or to school variables that they cannot control. The question is, having adjusted for differences in pupil and teacher inputs and having taken account of other characteristics of the schools, are there unexplained differences among schools that can be attributed to differences in the quality of school leadership and administration? Just as for teachers, accountability measures for school administrators are measures of relative pupil performance in a school after adjusting the data for differences in variables outside the administrators' control.

Consideration of the accountability problem at the school level draws attention to one difficulty with the concept of accountability measurement that may also, in some cases, be present at the classroom level. The difficulty is that although we would like to establish accountability for individual professionals, when two or more persons work together to perform an educational task there is no statistical way of separating their effects. This is easy to see at the school level. If a principal and two assistant principals administer a school, we may be able to evaluate their relative proficiency as a team, but since it is not likely that their respective administrative tasks would relate to different pupil performance measures there is no way of judging their individual contributions by analyzing educational outcomes. Similarly, if a classroom teacher works with a teaching assistant, there is no way, strictly speaking, to separate the contributions of the two. It is conventional in these situations to say that the senior person, who has supervisory authority, bears the responsibility for results. However, while this is administratively and perhaps even legally valid, it provides no solution to the problem of assessing the effort and skills of individuals. Therefore, there are definite limits, which must be kept in mind, to the capacity of a statistically based accountability system to aid in assessing individual proficiency.

District administrators. Although the same approach applies, in principle, to comparisons among districts (or decentralized components of larger districts), there are problems that may limit its usefulness in establishing accountability at the district level. One, of course, is the problem that has just been alluded to. Even it it were possible to establish the existence of overall district effects, it would be impossible to isolate the contributions of the local district board, the district superintendent, and other members of the district staff. A second problem is that comparisons among districts can easily fail

Barro, Stephen M. (Continued)

to take account of intangible community characteristics that may affect school performance. For example, such factors as community cohesion, political attitudes, and the existence of racial or other intergroup tensions could strongly influence the whole tone of education. It would be very difficult to separate effects of these factors from effects of direct, district-related variables in trying to assess overall district performance. Third, the concept of responsibility at the district level needs clarifying. In comparing schools, for example, it seems reasonable to adjust for differences in teacher characteristics on the grounds that school administrators should be evaluated according to how well they do, given the personnel assigned to them. However, at the district level, personnel selection itself is one of the functions for which administrators must be held accountable, as are resource allocation, program design, choice of curriculum, and other factors that appear as "givens" to the schools. In other words, in assessing comparative district performance, very little about districts can properly be considered as externally determined except, perhaps, the total level of available resources.* The appropriate policy, then, seems to be to include district identity as a variable in comparing schools and teachers so that net district effects, if any, will be taken into account. Districts themselves should be compared on a different basis, allowing only for differences in pupil characteristics, community variables, and overall constraints that are truly outside district control.

A Proposed Methodology

The basic analytical problem in accountability measurement is to develop a technique for estimating the contributions to pupil performance of individual agents in the educational process. A statistical method that may be suitable for that purpose is described here. The basic technique is multiple regression analysis of the relationship between pupil performance and an array of pupil, teacher, and school characteristics. However, the proposed method calls for two or three separate stages of analysis. The strategy is first to estimate the amount of performance variation that exists among classrooms after pupil characteristics have been taken into account, then, in subsequent stages, to attempt to attribute the interclassroom differences to teachers, other classroom variables, and school characteristics.[5] This methodology applies both to large school districts, within which it is suitable for estimating the relative effectiveness of individual teachers and schools in advancing pupil performance, and to state school systems, where it can be used, in addition, to obtain estimates of the relative effectiveness of districts. However, as noted above, there are problems that may limit its utility at the interdistrict level.

Pupil performance data. Since we are interested in estimating the contributions of individual teachers and schools, it is appropriate

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*In addition, of course, there are constraints imposed by state or federal authorities, but these are likely to be the same across districts.

Barro, Stephen M. (Continued)

to use a "value-added" concept of output. That is, the appropriate pupil performance magnitudes to associate with a particular teacher are the gains in performance made by pupils while in her class. Ideally, the output data would be generated by a program of annual (or more frequent) performance measurement, which would automatically provide before and after measures for pupils at each grade level.

It is assumed that a number of dimensions of pupil performance will be measured, some by standardized tests and some by other indicators or proxy variables. Specific measurement instruments to be used and dimensions of performance to be measured would have to be determined by individual school systems in accordance with their educational objectives. No attempt will be made here to specify what items should be included.* The methodology is intended to apply to any dimension of performance that can be quantified at least on an ordinal scale. Therefore, within a very broad range, it is not affected by the choice of output measures by a potential user.

Data on pupils, teachers, classrooms, and schools. To conform with the model to be described below, the variables entering into the analysis are classified according to the following taxonomy:

1. Individual pupil characteristics (ethnicity, socioeconomic status, home, family, and neighborhood characteristics, age, prior performance, etc.).

2. Teacher and classroom characteristics.

   a) Group characteristics of the pupils (ethnic and socio-economic composition, distribution of prior performance levels, etc., within the classroom).

   b) Teacher characteristics (age, training, experience, ability and personality measures if available, ethnic and socioeconomic background, etc.)

   c) Other classroom characteristics (measures of resource availability: class size, amount of instructional support, amount of materials, condition of physical facilities, etc.).

3. School characteristics.

   a) Group characteristics of the pupils (same as 2a, but based on the pupil population of the whole school).

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*Realistically, however, almost every school system will be likely to include reading achievement scores and other scores on standardized tests of cognitive skills among its output variables. Also, it will generally be desirable to include attendance or absenteeism as a variable, both because it may be a proxy for various attitudinal output variables and because it may be an important variable to use in explaining performance. Otherwise, there are innumerable possibilities for dealing with additional dimensions of cognitive and affective performance.

Barro, Stephen M. (Continued)

b) Staff characteristics (averages of characteristics in 2b for the school as a whole, turnover and transfer rates; characteristics of administrators--same as 2b).

c) Other school characteristics (measures of resource availability: age and condition of building, availability of facilities, amount of administrative and support staff, etc.).

No attempt will be made to specify precisely what items should be collected under each of the above headings. Determination of the actual set of variables to be used in a school system would have to follow preliminary experimentation, examination of existing data, and an investigation of the feasibility, difficulty, and cost of obtaining various kinds of information.

Steps in the analysis. The first step is to determine how different pupil performance in each classroom at a given grade level is from mean performance in all classrooms, after differences in individual pupil characteristics have been allowed for. The procedure consists of performing a multiple regression analysis with gain in pupil performance as the dependent variable. The independent variables would include (a) the individual pupil characteristics (category 1 of the taxonomy), and (b) a set of "dummy" variables, or identifiers, one for each classroom in the sample. The latter would permit direct estimation of the degree to which pupil performance in each classroom differs from pupil performance in the average classroom. Thus, the produce of the first stage of the analysis would be a set of estimates of individual classroom effects, each of which represents the combined effect on pupil performance in a classroom of all the classroom and school variables included in categories 2 and 3 of the taxonomy. At the same time, the procedure would automatically provide measures of the accuracy with which each classroom effect has been estimated. Therefore, it would be possible to say whether average performance gains in a particular classroom are significantly higher or lower than would be expected in a "typical" classroom or not significantly different from the mean.

Heuristically, this procedure compares performance gains by pupils in a classroom with gains that comparable pupils would be likely to achieve in a hypothetical "average" classroom of the system. This can be thought of as comparison of class performance gains against a norm, except that there is, in effect, a particular norm for each classroom based on its unique set of pupil characteristics. It may also be feasible to carry out the same analysis for specific subgroups of pupils in each class so as to determine, for example, whether there are different classroom effects for children from different ethnic or socioeconomic groups.

Barro, Stephen M. (Continued)

Estimation of teacher contributions. The second stage of the analysis has two purposes: (1) to separate the effects of the teacher from effects of nonteacher factors that vary among classrooms; and (2) to determine the extent to which pupil performance can be related to specific, measurable teacher attributes. Again, the method to be used is regression analysis, but in this case with a sample of classroom observations rather than individual pupil observations. The dependent variable is now the classroom effect estimated in stage one. The independent variables are the teacher-classroom characteristics and "dummy" variables distinguishing the individual schools.

Two kinds of information can be obtained from the resulting equations. First, it is possible to find out what fraction of the variation in performance gains among classrooms is accounted for by nonteacher characteristics, including group characteristics of the pupils and measures of resource availability in the classroom. The remaining interclassroom differences provide upper-bound estimates of the effects that can be attributed to teachers. If there is sufficient confidence that the important nonteacher variables have been taken into account, then these estimates provide the best teacher accountability measures. They encompass the effects of both measured and unmeasured teacher characteristics on teacher performance. However, there is some danger that such measures also include effects of group and classroom characteristics that were inadvertently neglected in the analysis and that are not properly attributable to teachers. This problem is referred to again below.

Second, we can find out the extent to which differences among classrooms are explained by measured teacher characteristics. Ideally, of course, we would like to be able to attribute the whole "teacher portion" of performance variation to specific teacher attributes and, having done so, we would be much more confident about our overall estimates of teacher effectiveness. But experience to date with achievement determinant studies has shown that the more readily available teacher characteristics--age, training, experience, and the like--account for only a small fraction of the observed variance. It has been shown that more of the variation can be accounted for when a measure of teacher verbal ability is included.[6] Still more, presumably, could be accounted for if a greater variety of teacher ability and personality measurements were available. At present, however, knowledge of what teacher characteristics influence pupil performance is incomplete and satisfactory instruments exist for measuring only a limited range of teacher-related variables. This means that with an accountability information system based on current knowledge, the excluded teacher characteristics could be at least as important as those included in determining teacher effectiveness. For the time being, then, the interclassroom variation in results that remains after nonteacher effects have been allowed for probably provides the most useful accountability measures, though the danger of bias due to failure to include all relevant nonteacher characteristics must be recognized.

Barro, Stephen M. (Continued)

The principal use of these estimates would be in assessing the relative effectiveness of individual teachers in contributing to gains in pupil performance. More precisely, it would be possible to determine whether each teacher's estimated contribution is significantly greater or significantly smaller than that of the average teacher. At least initially, until there is strong confirmation of the validity of the procedure, a rather stringent significance criterion should be used in making these judgments and no attempt should be made to use the results to develop finer gradations of teacher proficiency.

The analysis will also make it possible to determine the extent to which measured teacher characteristics are significantly correlated with teacher effectiveness. Potentially, such information could have important policy implications and impacts on school management, resource allocation, and personnel practices. A number of these potential applications are noted at the end of the paper.

Estimation of contributions by school administrators. The same analytical techniques can be used in estimating the relative effectiveness of different schools in promoting pupil performance. Conceptually, a school accountability index should measure the difference between pupil performance in an individual school and average pupil performance in all schools after all pupil, teacher, and classroom variables have been accounted for. Such measures can be obtained directly if school dummy variables are included in the regression equation, as described earlier. Of course, the results measure total school effects, without distinguishing among effects due to school administration, effects of physical attributes of the school, and effects of characteristics of the pupil population. It may be feasible to perform a third-stage analysis in which the results are systematically adjusted for differences in the latter two categories of variables, leaving residual effects that can be attributed to the school administrators. These would constitute the accountability measures to be used in assessing the effectiveness of the principal and his staff. The results may have policy implications with respect to differential allocation of funds or resources among the different schools and, of course, implications with respect to personnel. Also, as would be done for teachers, an attempt could be made to relate measured characteristics of the school administrators to the estimated school effects. By so doing, it might be possible to learn whether administrator training and experience and other attributes are reflected in measured school output. Even negative results could provide important guidance to research on administrator selection and assignment.

Comparisons among districts. For reasons that have already been stated, it would probably be desirable to treat comparisons among districts separately from comparisons among classrooms and schools. This could be done by means of yet another regression analysis, with individual pupil performance gain as the dependent variable and with independent variables consisting of pupil and community characteristics, measures of resource availability, and a dummy variable or identifier for each

Barro, Stephen M. (Continued)

district being compared. The purpose would be to determine whether there are significant differences in results among districts once the other factors have been allowed for. If there are, the findings could be interpreted as reflections of differences in the quality of district policy making and management. But as pointed out earlier, there would be uncertainty as to the causes of either shortcomings or superior performance. Nevertheless, the results could have some important, policy-related uses, as will be noted shortly.

The Need for Experimental Verification of the Approach

The methodology described here carries no guarantee. Its success in relating outcomes to sources may depend both on features of the school systems to which it is applied and on the adequacy of the statistical models in mirroring the underlying (and unknown) input-output relationships in education. The validity and usefulness of the results must be determined empirically from field testing in actual school systems. Experimental verification, possibly requiring several cycles of refinement and testing, must precede implementation of a "working" accountability system.

Potential problems. Three kinds of technical problems can threaten the validity of the system: intercorrelation, omission of variables, and structural limitations of the models. None of these can be discussed in detail without mathematics. However, a brief explanation of each is offered so that the outlook for the proposed approach can be realistically assessed.

Intercorrelation. This is a problem that may arise where there are processes in a school system that create associations (correlations) between supposedly independent variables in the model. An important example is the process--said to exist in many systems--whereby more experienced, better trained, or simply "better" teachers tend to be assigned or transferred to schools with higher socioeconomic status (SES) pupils. Where this occurs, pupil SES will be positively correlated with those teacher characteristics. On the average, high SES children would be taught by one kind of teacher, low SES children by another. This would make it difficult to say whether the higher performance gains likely to be observed for high SES pupils are due to their more advantaged backgrounds or to the superior characteristics of their instructors. There would be ambiguity as to the magnitude of the teacher contribution and a corresponding reduction in the reliability of estimates of individual teacher effectiveness. Thus, the quality of accountability information would be impaired.

This problem can take many forms. There may be strong correlations between characteristics of pupils and characteristics of school staffs, between teacher characteristics and nonteacher attributes of the schools, between classroom-level and district-level variables, and so on. The general effect is the same in each instance: ambiguity resulting in diminished ability to attribute results to sources.[7]

Barro, Stephen M. (Continued)

There are several things that can be done to mitigate the effects of intercorrelation. One is to stratify the data. For example, if teacher characteristics were linked to pupil SES, it would be possible to stratify the classrooms by pupil SES and to perform separate analyses for each stratum. This would eliminate some of the ambiguity within strata. On the other hand, comparisons of teachers across strata would be precluded. Another possible solution would be to take account of interdependence explicitly in the statistical models. Some attempts along this line have been made in studies of determinants of school performance. However, this solution is likely to raise a whole new array of technical problems as well as questions about the feasibility of routine use of the methodology within school systems.

The problem of omitted variables. The validity and fairness of the proposed approach would depend very strongly on inclusion of all major relevant variables that could plausibly be cited by teachers or administrators to "explain" lower-than-average estimated contributions. This means that all variables would have to be included that (a) have significant, independent effects on performance and (b) are likely to be nonuniformly distributed among classrooms and schools.

It will never be possible to demonstrate in a positive sense that all relevant variables have been included. Many intangible, difficult-to-measure variables, such as pupil attitudes, morale, "classroom climate," etc., can always be suggested. What can be done is to determine as well as possible that none of the additional suggested variables is systematically related to the estimated teacher and school contributions. In an experimental setting, administrators could be interviewed for the purpose of identifying alleged special circumstances, and tests could be carried out to see whether they are systematically related to performance differences.

Structural limitations of the models. The models described here may be too simple to take account of some of the important relationships among school inputs and outputs. One such shortcoming has already been noted: The models do not allow for possible interdependencies among the various pupil and school characteristics. Another, which may prove to be more troubling, is that interactions among the various output or performance variables have also not been taken into account.

Researchers have pointed to two distinct kinds of relationships. First, there may be trade-offs between performance areas.[8] A teacher or school may do well in one area partly at the expense of another by allocating resources or time disproportionately between the two. Second, there may be complementary relationships. Increased performance in one area (reading, for example) may contribute directly to increased performance in others (social studies or mathematics). Therefore, treatment of one dimension of output at a time, without taking the interactions into account, could produce misleading results.

Econometricians have developed "simultaneous" models, consisting of

Barro, Stephen M. (Continued)

whole sets of equations, specifically to take account of complex, multiple relationships among variables. Some attempts have been made to apply these models to studies of determinants of educational outcomes.[9] It may prove necessary or desirable to use them in an accountability measurement system, despite the complexity they would add, to eliminate biases inherent in simpler models.

Validity. Another important reason for thoroughly testing the accountability measurement system is that its validity needs to be assessed. Some of the procedures mentioned above contribute to this end, but more general demonstration would also be desirable. Two procedures that may be feasible in an experimental situation are as follows:

Replication. A strong test of whether the method really gets at differences in effectiveness instead of differences in circumstances would be to apply it to the same teachers and schools during two or more years. Consistency in results from year to year would strongly support the methodology. Lack of consistency would show that major influences on performance remained unmeasured or neglected. Certainly, if the results were to be used in any way in connection with personnel assignment, reward, or promotion, the use of several years' estimates would be an important guarantee of both consistency and fairness.

An external test of validity. The most direct way to test the validity of the statistical approach is to compare the results with alternative measures of teacher and school effectiveness. The only measures that are likely to be obtainable are subjective assessments by informed and interested parties. Though such evaluations have many shortcomings, it could be valuable in an experimental situation to see how well they agreed with the statistical results. Two important questions that would have to be answered in making such a comparison are: (1) Who are the appropriate raters--peers, administrators, parents, or even pupils? and (2) What evaluation instruments could be used to assure that subjective assessments apply to the same dimensions of performance as were taken into account in the statistical analysis? It may not be possible to provide satisfactory answers. Nevertheless, the feasibility of a comparison with direct assessments should be considered in connection with any effort to test the proposed accountability measurement system.

Potential Uses of Accountability Measures

Space does not permit a full review of the potential uses of an accountability measurement system. However, an idea of the range of applications and their utility can be conveyed by listing some of the main possibilities.

Identification of effective schools. The most rudimentary use of the proposed accountability measures is as an identification device. Once relative school effectiveness is known, a variety of actions can follow, even if there is ambiguity about causes. As examples, less formal

Barro, Stephen M. (Continued)

evaluation efforts can be more precisely targeted once school effectiveness with different kinds of children is known and campaigns can be initiated to discover, disseminate, and emulate good practices of high-performing schools.

Personnel assignment and selection. Accountability measures may help to improve both staff utilization and selection of new personnel. Personnel utilization could be improved by using information on teacher effectiveness in different spheres and with different types of students for guidance in staff assignment. Selection and recruitment could be aided by using information from the models as a guide to performance-related characteristics of applicants and as a basis for revising selection procedures and criteria.

Personnel incentives and compensation. An accountability measurement system can be used to establish a connection between personnel compensation and performance. One use would be in providing evidence to support inclusion of more relevant variables in pay scales than the universally used and widely criticized training and experience factors. Another possibility would be to use accountability measures as inputs in operating incentive pay or promotion systems. The latter, of course, is a controversial proposal, long resisted by professional organizations. Nevertheless, putting aside other arguments pro and con, the availability of objective measures of individual contributions would eliminate a major objection to economic incentives and help to make the idea more acceptable to all concerned.

Improved resource allocation. An accountability measurement system could also contribute to other aspects of resource allocation in school systems. Analytical results from the models could be of value, for example, in setting policies on class size, supporting services, and similar resource variables. More directly, school accountability measures could provide guidance to district administrators in allocating resources differentially among schools according to educational needs. Similarly, state-level results could be used in determining appropriate allocations of state aid funds to districts.

Program evaluation and research. Models developed for accountability could prove to be valuable tools for program evaluation and research. They could be readily adapted for comparing alternative ongoing programs simply by including "program" as one of the classroom variables. Also, "norms" provided by the models for specific types of pupils could be used as reference standards in evaluating experimental programs. This would be preferable, in some cases, to using experimental control groups. Viewed as research tools, the models could help to shed light on one of the most basic, policy-related problems in education, the relationship between school inputs and educational output. The process of developing the models could itself by very instructive. The results could add substantially to our knowledge of how teachers and schools make a difference to their pupils.

Barro, Stephen M. (Continued)

In sum, there are many potential uses of the proposed measures and models, some going well beyond what is generally understood by "accountability." If the development of a system is undertaken and carried through to completion, the by-products alone may well prove to be worth the effort.

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[1]See Education Vouchers: A Preliminary Report on Financing Education by Payments to Parents, Center for the STudy of Public Policy, Cambridge, Mass., March, 1970.

[2]James S. Coleman et al., Equality of Educational Opportunity. Washington, D.C.: Office of Education, 1966.

[3]George W. Mayeske et al., "A Study of Our Nation's Schools" (a working paper), Office of Education, 1970.

[4]E.g., Eric A. Hanushek, "The Education of Negroes and Whites," unpublished Ph.D. dissertation, M.I.T., 1968; and Herbert J. Kiesling, "The Relationship of School Inputs to Public School Performance in New York State," The Rand Corporation, P-4211, October, 1969.

[5]The statistical method described here is essentially the same as that used by Eric A. Hanushek in a study, The Value of Teachers in Teaching, to be published in late 1970 by the Rand Corporation.

[6]Hanushek, The Value of Teachers in Teaching, op.cit.

[7]The existence of this type of ambiguity in analyses of the Coleman survey data is one of the principal findings reported in Mayeske, op.cit.

[8]See Henry M. Levin, "A New Model of School Effectiveness," in Do Teachers Make a Difference? Washington, D.C.: Office of Education, 1970, pp. 56-57.

[9]Ibid., pp. 61 ff.

Dyer, Henry S. "Toward Objective Criteria of Professional Accountability in the Schools of New York City," PHI DELTA KAPPAN LII:206-211, December 1970.

I. The Concept of Professional Accountability

The concept of accountability can have many levels of meaning, depending upon where one focuses attention in the structure of the school system. Throughout this paper I shall be using the term in a restricted sense as it applies to the individual school as a unit. At this level I think of the concept as embracing three general principles:

1. The professional staff of a school is to be held collectively responsible for knowing as much as it can (a) about the intellectual and personal-social development of the pupils in its charge and (b) about the conditions and educational services that may be facilitating or impeding the pupils' development.

2. The professional staff of a school is to be held collectively responsible for using this knowledge as best it can to maximize the development of its pupils toward certain clearly defined and agreed-upon pupil performance objectives.

3. The board of education has a corresponding responsibility to provide the means and technical assistance whereby the staff of each school can acquire, interpret, and use the information necessary for carrying out the two foregoing functions.

I emphasize the notion of joint accountability of the entire school staff in the aggregate - principal, teachers, specialists - because it seems obvious that what happens to any child in a school is determined by the multitude of transactions he has with many different people on the staff who perform differing roles and presumably have differing impacts on his learning, which cannot readily, if ever, be disentangled. I emphasize the notion that staff members are to be held accountable for keeping themselves informed about the diverse needs of their pupils and for doing the best they can to meet those needs. In light of what we still don't know about the teaching-learning process, this is the most one may reasonably expect. To hold teachers, or anybody else, accountable for delivering some sort of "guaranteed pupil performance" is likely to do more harm than good in the lives of the children. Finally, I emphasize that professional accountability should be seen as a two-way street, wherein a school staff is to be held accountable to higher authority for its own operations while the higher authorities in turn are to be held accountable for supplying the appropriate information and facilities each school staff requires to operate effectively.

Dyer, Henry S. Continued

An important implication in the three principles set forth above is that there shall be developed a district-wide educational accounting system optimally adaptable to the information needs of each school in the district. Later in this paper I shall describe the salient features of such a system and shall suggest the procedures by which it might be developed and put to use. In this connection it should be noted that the type of educational accounting system here contemplated is to be distinguished from a fiscal accounting system. The kind of information provided by the former should not be confused with the kind provided by the latter. At all levels, the two types should complement each other in an overall management information system capable of relating benefits to costs. At the individual school level, however, educational accounting per se is of prime importance and is not usefully related to fiscal accounting, since the staff in a single school does not have and, in ordinary circumstances, cannot have much if any latitude in the raising and expending of funds for its local operations.

The next section of this paper outlines what a fully functioning educational accounting system might be like and how it could operate as a means for holding a school staff accountable, within certain constraints, for continually improving the effectiveness of its work. The last section briefly sketches plans by which the system might be brought into being and contains some cautions that should be heeded along the way.

II. Characteristics of an Educational Accounting System

A. Pupil-Change Model of a School

The theory behind the first of the three principles stated in the preceding section is that if a school staff is to fulfill its professional obligations it must have extensive knowledge of the pupils it is expected to serve. This theory is based on the notion of a school as a social system that effects changes of various kinds in both the children who pass through it and in the professional personnel responsible for maintaining the school. The school as a social system becomes an educational system when its constituents are trying to ensure that all such changes shall be for the better. That is, the school as a social system becomes and educational system when its constituents - pupils, teachers, principal - are working toward some clearly defined pupil performance objectives.

There are four groups of variables in the school as a social system that must be recognized and measured if one is to develop acceptable criteria of staff accountability. These four groups of variables I call input, educational process, surrounding conditions, and output. Taken together, they form the pupil-change model of a school.

Dyer, Henry S. Continued

The input to any school at any given level consists of the characteristics of the pupils as they enter that level of their schooling: their health and physical condition, their skill in the three R's, their feelings about themselves and others, their aspirations, and so on.* The output of any school consists of the same characteristics of the pupils as they emerge from that particular phase of their schooling some years later.

According to this conception, the input to any school consists of the output from the next lower level. Thus, the output of an elementary school becomes the input for junior high, and the output of junior high becomes the input for senior high. It is important to note that the staff of an individual school which is not in a position to select the pupils who come to it has no control over the level or quality of its input. In such a case, the pupil input represents a fixed condition with which the school staff must cope. The pupil output, however, is a variable that depends to some extent on the quality of service the school provides.

The third group of variables in the pupil-change model consists of the surrounding conditions within which the school operates. These are the factors in the school environment that may influence for better or for worse how teachers teach and pupils learn. The surrounding conditions fall into three categories: home conditions, community conditions, and school conditions. Home conditions include such matters as the level of education of the pupils' parents, the level of family income, the family pressures, and the physical condition of the home. Community conditions include the density of population in the enrollment area, the ethnic character of the population, the number and quality of available social agencies, the degree of industrialization, and so on. School conditions include the quality of the school plant, pupil-teacher ratio, classroom and playground footage per pupil, the esprit de corps of the staff, and the like.

In respect to all three types of surrounding conditions, one can distinguish those that the staff of a school finds easy to change from those that it finds hard to change. For example, in respect to home conditions, the school staff is hardly in a position to change the socioeconomic level of pupils' parents, but it may well be in a position to change the parents' attitudes toward education through programs that involve them in the work of the school. Similarly, in respect to school conditions,

*Note the restriction of meaning of the term input as used here. It does not include such variables as per pupil expenditure, institutional effort, facilities, and the like.

Dyer, Henry S. Continued

it might not be able to effect much change in the classroom footage per pupil, but it could probably develop programs that might influence the esprit de corps of the staff through in-service training. The identification of hard-to-change as contrasted with easy-to-change surrounding conditions is of the utmost importance in working toward objective criteria of professional accountability, since the staff of a school can hardly be held accountable for changing those factors in its situation over which it has little or no control.

The final set of variables in the pupil-change model are those that make up the educational process; that is, all the activities in the school expressly designed to bring about changes for the better in pupils: lessons in arithmetic, recreational activities, consultation with parents, vocational counseling, etc. Three principal questions are to be asked about the education processes in any school: 1) Are they adapted to the individual needs of the children in the school? 2) Do they work, that is, do they tend to change pupils in desirable ways? and 3) What, if any, negative side effects may they be having on the growth of the children?

The four sets of variables just described - input, output, surrounding conditions, and educational process - interact with one another in complex ways. That is, the pupil output variables are affected by all the other variables. Similarly, the educational process variables are influenced by both the pupil input and the surrounding conditions. And certain of the surrounding conditions may be influenced by certain of the educational processes. This last could happen, for instance, if a school embarked on a cooperative work-study program with businesses in its enrollment area.

From the foregoing considerations, it is clear that if a school staff is to maximize pupil output in any particular way, it must be aware of the nature of the interactions among the variables in the system and be given sufficient information to cope with them in its work. This in turn means that, insofar as possible, all variables in the system must be measured and appropriately interrelated and combined to produce readily interpretable indices by which the staff can know how much its own efforts are producing hoped-for changes in pupils, after making due allowance for those variables over which it has little or no control. I call such indices school effectiveness indices (SEI's). They are the means whereby a school staff may be held responsible for knowing how well it is doing.

B. Nature of the SEI

The functioning of a school can be described by a profile of school effectiveness indices, so that each school staff can readily locate

Dyer, Henry S. Continued

the points at which its educational program is strong or weak. Such a profile is fundamentally different from the traditional test-score profile, which is ordinarily generated from the grade equivalencies attached to the general run of standardized achievement tests. The underlying rationale of an SEI profile rejects grade equivalencies as essentially meaningless numbers that tend to be grossly misleading as indicators of a school's effectiveness. Appropriate indices in the SEI profile of any given school at any given level can be derived only through a procedure involving all the schools at the same level in the district. The procedure consists of a series of regression analyses which I shall touch upon presently.

Two features of an SEI profile differentiate it from the usual test-score profile. First, each index summarizes how effective the school has been in promoting one type of pupil development over a definite span of years; for example, the three years from the beginning of grade four to the end of grade six. Second, the profile has two dimensions: a pupil development dimension comprehending different areas of pupil growth (e.g., growth in self-esteem, growth in the basic skills, growth in social behavior) and a level-of-pupil-input dimension which might encompass three categories of children in accordance with their varying levels of development in any area at the time they entered grade four.

With this sort of profile it should be possible to discern in which areas of pupil development a school is more or less effective with different groups of pupils. Thus, an SEI profile for a grade four to six school should be capable of answering questions like the following: In its teaching of reading over the three-year period, has the school done a better or worse job with pupils who entered grade four with a low level of reading performance as compared with those who entered with a high level of reading performance? During the three-year period, has the school been more or less effective in developing children's number skills than in developing their sense of self-esteem, or their social behavior, or their health habits?

The areas of pupil development to be incorporated in the educational accounting system for any district must grow out of an earnest effort to reach agreement among all the parties involved (teachers, administrators, board members, parents, pupils) concerning the pupil performance objectives that are to be sought. Such objectives will vary for schools encompassing different grade levels, and they will also vary, in accordance with local needs, among schools serving any given grade levels.

Dyer, Henry S. Continued

Securing agreement on the objectives is no mean enterprise, but it is obviously fundamental to a meaningful approach to the establishment of any basis for holding professional educators accountable for their own performance in the schools.

C. Derivation of the SEI

One important point to keep in mind about any school effectiveness index is that it is a measure that must be derived from a large number of more fundamental measures. These more fundamental measures consist of three of the sets of variables suggested earlier in the discussion of the pupil-change model of a school as a social system, namely, 1) the pupil input variables, 2) the hard-to-change surrounding conditions, and 3) the pupil output variables. Measures of easy-to-change surrounding condition variables and of the educational process variables do not enter into the derivation of SEI's. They become of central importance subsequently in identifying the specific actions a school staff should take to improve the effectiveness of its operations.

The fundamental measures from which the indices are to be derived can take many different forms: academic achievement tests; questionnaires to get at matters like pupil self-esteem; physical examinations to assess health and health habits; a wide range of sociological measures to assess community conditions; and measures of various aspects of the school plant, equipment, and personnel. Techniques for securing many of these measures are already available, but new and more refined ones will be required before a reasonably equitable educational accounting system can be fully operable.

Given the total array of measures required for the derivation of the SEI's, the first step in the derivation will be to apply such measures in all schools in the system at any given level - e.g., all the elementary schools, all the senior high schools - to secure the necessary information on pupil input and on the hard-to-change surrounding conditions.

The second step, to be taken perhaps two or three years later, will be to obtain output measures on the same pupils, i.e., those pupils who have remained in the same schools during the period in question.*

*The problem presented by the movement of pupils from school to school is one that can be handled in various ways at the district level, but not at the level of the individual school. Therefore, it will not be discussed here. Under the present conception of staff accountability, it appears reasonable to assume that the only fair index of school effectiveness is one that rests on input-output data obtained only on those pupils with whom the school staff has been in continuous contact over a specified period of months or years.

Dyer, Henry S. Continued

The third step will be to distribute the pupils within each school into three groups - high, middle, and low - on each of the input measures. Two points are to be especially noted about this step. First, the distribution of input measures must be "within school" distributions, with the consequence that the pupils constituting the "high" group in one school could conceivably be in the "low" group at another school where the input levels run higher with respect to any particular "area of development." Secondly, within any school, a pupil's input level could be high in one area of development (e.g., basic skills) and middle or low in another area of development (e.g., health).

The fourth step in deriving the SEI's is to compute, for each school, the averages of the hard-to-change condition variables that characterize the environment within which the school has had to operate.

The fifth step is to get, again for each school, the average values of all the output measures for each of the three groups of pupils as identified by the input measures.

When all these data are in hand it becomes possible, by means of a series of regression analyses, to compute the SEI's that form the profile of each school.

A rough impression of how this process works may be obtained from an examination of the chart in Figure 1, which was developed from reading test scores obtained on pupils in 91 schools.* The measures of input in reading were taken at the beginning of grade four, and the measures of output at the end of grade six. The numbers along the horizontal axis of the chart summarize the level of grade four reading input and hard-to-change conditions with which each school has had to contend. This summarization is expressed in terms of the grade six predicted average reading levels as determined by the regression analysis.

The numbers along the vertical axis show the actual average reading levels for each school at the end of grade six. For each school, the discrepancy between its predicted grade six reading level and its actual grade six average reading level is used as the measure of the effectiveness with which it has been teaching reading over the three-year period. It is the discrepancy between predicted and actual level of performance that is used to determine the SEI in reading for any school. In this case the SEI's have been assigned arbitrary values ranging from a low of one to a high of five.

*It should be noted that this example does not include the important refinement that calls for assessing the schools' effectiveness for each of three levels of pupil input in reading.

Dyer, Henry S. Continued

Consider the two schools A and B. They both have predicted grade six reading averages of about 60. This indicates that they can be deemed to have been operating in situations that are equivalent in respect to their levels of input at grade four and the hard-to-change conditions that have obtained over the three-year period during which their pupils have gone from grades four through six.

The actual reading output levels at grade six for schools A and B are considerably different. A's actual level is about 73; B's actual level is about 48. As a consequence, school A gets an effectiveness index for the teaching of reading of five, while school B gets an effectiveness index of only one.

Schools C and D present a similar picture, but at a lower level of pupil input and hard-to-change conditions. Both have predicted averages of about 50, but C's actual average is about 56, while D's is only 38. Therefore, C gets an SEI of four, and D gets an SEI of only one.

From these two pairs of illustrations, it should be noted that the proposed method of computing school effectiveness indices automatically adjusts for the differing circumstances in which schools must operate. This feature of the index is a sine qua non of any system by which school staffs are to be held professionally accountable.

D. Uses of the SEI

It was suggested at the beginning of this paper that one of the general principles underlying the concept of professional accountability is that the staff of a school is to be held responsible for using its knowledge of where the school stands with respect to the intellectual and personal-social development of its pupils. This is to say that it is not sufficient for a school to "render an accounting" of its educational effectiveness. If the accounting is to have any educational payoff for the pupils whom the school is supposed to serve, the indices should point to some specific corrective actions designed to increase the school's effectiveness.

Many of such actions will perforce be outside the scope of the school itself, and responsibility for taking them must rest with the central administration. In most cases, however, a considerable number of such corrective actions should be well within the competence of the professional staff of the individual school. Responsibility for carrying them out can and should rest with that staff.

The function of school effectiveness indices in this connection is to indicate where a school staff might turn to find ways of improving its performance.

To illustrate how the SEI's might serve this purpose, let us speculate further about the relative positions of schools A and B in Figure 1.

Dyer, Henry S. Continued

Since both schools show the same predicted output in reading for such pupils, it can be presumed that both schools are operating under equivalent advantages and handicaps in respect to the conditions that affect the reading ability of those pupils. Therefore, it is entirely legitimate to raise the questions: Why is school A doing so much better than school B in the teaching of reading? and What specifically is school A doing for its pupils that school B is not now doing, but presumably could be doing and ought to be doing to close the gap?

The reasons for the discrepancy between the two schools on this particular SEI are to be sought among the two sets of variables that did not enter into the derivation of the SEI's: namely, those variables that were designated "educational process" and those designated "easy-to-change surrounding conditions." A systematic comparison of how the two schools stand with respect to these variables should provide the professional staff of school B with useful clues for actions that might be taken to increase its effectiveness in the teaching of reading.

The outcome of this exercise might turn up something like this.

1. School A conducts an intensive summer program in reading; school B does not.

2. School A has a tutorial program conducted by high school students for any pupil who wishes to improve his reading; school B has no such program.

3. School A conducts parent-teacher study groups to stimulate more reading in the home; school B has little contact of any kind with the parents of its pupils.

There is, of course, no absolute guarantee that if school B were to initiate such programs it would automatically raise its SEI in reading from one to five. The factors involved in the life and workings of a school are not all that certain and clear-cut. Nevertheless, there should be a plain obligation on the staff of school B to at least try the procedures that appear to be working for school A and to monitor such efforts over a sufficient period to see whether they are having the desired effects. This particularization of staff effort contains the essence of what must be involved in any attempt to guarantee the professional accountability of a school staff.

The approach to accountability through a system of SEI's, if it is well understood and accepted throughout the schools of the district, should provide a mechanism for stimulating directed professional efforts toward the continuous improvement of educational practice on many fronts in all the schools.

Dyer, Henry S. Continued

III. Plans and Cautions

A. Short-Range and Long-Range Plans

Clearly a full-scale educational accounting system of the sort here envisaged is hardly one that can be designed and installed full-blown in a year or two. It is one that would have to be worked out, piece by piece, over a considerable period of years. It contains technical problems many of which cannot be foreseen in advance and can only be tackled as the accounting system comes into actual operation. More importantly, it would require a massive effort to secure the necessary understanding and cooperation from all the professional and community groups to be affected by it.

Nevertheless, because of the urgency of the situation in urban education and because no adequate and equitable educational accounting system can ever eventuate until some practical action is taken to get it under way, it is strongly suggested that a beginning should be made forthwith by means of a two-pronged approach. One approach would look to the carrying out of a partial short-range plan over the next two years; the other to the laying out of a long-range plan for the full-scale operation of the system to be achieved in, say, six years.

The short-range plan could begin with the reasonable assumption that there are two areas of pupil development that are of universal concern, especially as they touch the lives of minority group children in the early years of their schooling. These areas are reading and health. Acting on this assumption, one might, from currently available data, obtain input measures of these two variables on all children entering grades one and three with a view to getting ouput measure on the same children two years later. During the two intervening years a number of the more readily available measures of the hard-to-change conditions affecting each of the elementary schools in the system could conceivably be obtained - e.g., socioeconomic status of pupils' parents, population density and ethnicity of each enrollment area, pupil-teacher ratio, classroom and playground footage per pupil, rate of pupil mobility, and the like. Thus, by the end of the second year, one would be in a position to compute tentative school effectiveness indices and prepare two SEI profiles for each elementary school in the system - one covering grades one and two, the other covering grades three and four. These profiles could then be used as bases for local discussions concerning their meaning and utility as measures of professional accountability.*

The purpose of a short-range program of this sort would be twofold: 1) to provide a first approximation of two important and practically useful

*As rapidly as community acceptance was achieved, the system could be put on an annual basis and enlarged year by year to include more grades and more areas of pupil development.

Dyer, Henry S. Continued

objective criteria of professional accountability, and 2) to provide a concrete basis for bringing about a genuine understanding of what an educational accounting system is and how it can work for the benefit of the schools and the children who attend them.

Concurrently with the foregoing short-range effort, the development of a long-range plan should get under way. The first step in this planning process would be to initiate parent-teacher discussion to try 1) to reach a consensus on educational objectives in terms of the areas of pupil development that should be involved in an overall annual system for professional accounting, and 2) to agree on the priorities among such objectives as they might most appropriately apply to the educational needs of the pupils in each school. The second step in the long-range plan would be to assemble instruments for measuring input and output which would be appropriate and compatible with the objectives for each level of schooling. The third step would be to work out the means for collecting and analyzing the necessary data for measuring the conditions within which each school is operating and the specific processes that characterize its operations.

B. Avoiding False Starts

One reason for initiating long-range planning concurrently with working through a partial short-range program is to try to ensure that the ultimate goal of the full-scale system will not be lost from sight while major attention is necessarily focused on the detailed problems of getting a partial operating system under way quickly. In the search for ways around the short-range problems, it is altogether probable that a number of compromises will have to be made. The danger is that, unless the final end is kept in full view, some of these compromises will be such as to preclude attainment of a viable total system.

One mistake, for instance, that could be made at the outset of the short-range program would be to yield to demands to use the input or output measures as if they were themselves measures of school effectiveness. The whole point of this paper is that a meaningful and equitable accounting of school effectiveness is possible only under two stringent conditions: 1) it must rest on at least two measures of pupil performance with a sufficient interval between them - probably not less than two years - to permit the school to have an effect on pupil learning which is large enough to be observable; and 2) any output measure of pupil performance must be read in light of the level of pupil input and also in light of the conditions in which the school has been forced to operate during the period for which its effectiveness in the several areas of pupil development is being indexed. This point cannot be too strongly stressed. To compromise with this basic principle would wreck the entire enterprise.

A second mistake that could seriously damage the development of the system would be to introduce into it measures of I.Q. as though they

Dyer, Henry S. Continued

were measures of pupil input available simultaneously with measure of pupil output. This type of misuse of test scores has had a disastrous effect on the interpretation of educational measurements for at least 50 years. It should not be prolonged.

A third type of mistake to be avoided is that of concentrating the effort to develop SEI's on a certain selected group of schools (e.g., those in poverty areas) but not on others. If this is done the SEI's simply will not mean anything. A basic requirement in their derivation and use is that the essential measures must be obtained on all schools in the system so as to determine which schools are indeed comparable.

One other type of mistake that could be made in embarking on the short-range project would be to concentrate all the effort on a single area of pupil development, namely, the "basic skills." The danger here - and it is one by which schools have all too frequently been trapped - is threefold. First, it encourages the notion that, as far as the school is concerned, training in the basic skills is all that matters in a society where so many other human characteristics also matter. Secondly, it tends toward neglect of the fact that if a school gives exclusive attention to this one area of pupil development, it may purchase success in this area at the expense of failure in other areas - social behavior, for instance. Thirdly, it tends to blind people to the interrelatedness of educational objectives, that is, to the fact that pupil development in one area may be heavily dependent on development in other areas. Learning to read, for example, may be dependent on the pupil's maintaining good health. And the pupil's sense of his worth as a human being may be dependent on his ability to read. It is for these reasons that the short-range program suggested above includes at a minimum two widely different areas of pupil development.

C. Avoiding False Analogies

The term educational accountability, as used most recently by certain economists, systems analysts, and the like, has frequently been based on a conceptualization that tends, by analogy, to equate the educational process with the type of engineering process that applies to industrial production. It is this sort of analogy, for instance, that appears to underlie proposals for "guaranteed performance contracting" as exemplified in the much-publicized Texarkana project. The analogy is useful to a point. But there is also a point beyond which it can be so seriously misleading as to undermine any sensible efforts to develop objective criteria of professional accountability.

It must be constantly kept in mind that the educational process is not on all fours with an industrial process; it is a social process in which human beings are continually interacting with other human beings in ways that are imperfectly measurable or predictable. Education does not deal with inert raw materials, but with living minds that are instinctively concerned first with preserving their own integrity and second with

Dyer, Henry S. Continued

reaching a meaningful accommodation with the world around them. The output of the educational process is never a "finished product" whose characteristics can be rigorously specified in advance; it is an individual who is sufficiently aware of his own incompleteness to make him want to keep on growing and learning and trying to solve the riddle of his own existence in a world that neither he nor anyone else can fully understand or predict.

It is for this reason that the problems involved in developing objective criteria of professional accountability will always be hard problems. They are problems, however, that must be tackled with all the human insight and goodwill that can be mustered if the schools of this urban society are to meet the large challenges that now confront them.

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